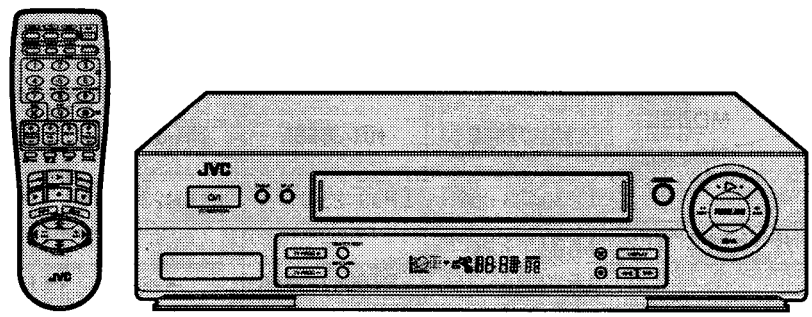
JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-J658E/EH/J700E



VHS PAL

Hi-Fi

SHOWVIEW

Regarding service information other than these sections, refer to the HR-J758E/EH service manual (No. 82661). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS

GENERAL

Power requirement	: AC 220 – 240 V~, 50/60 Hz
Power consumption	
Power on	: 24 W
Power off	: 5.5 W
Power save (HR-J658E and HR-J700E only)	: 3 W
Temperature	
Operating	: 5°C to 40°C
Storage	: –20°C to 60°C
Operating position	: Horizontal only
Dimensions (WxHxD)	: 400 x 94 x 340 mm
Weight	: 3.8 kg
Format	: VHS PAL standard
Maximum recording time	
(SP)	: 240 min. with E-240 video cassette
(LP)	: 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	: PAL-type colour signal and CCIR monochrome signal,625 lines50 fields
Recording system	: DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	: 45 dB
Horizontal resolution	: 250 lines
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	: 21-pin scart connectors : IN/OUT x 1, IN/DECODER x 1 RCA connector: AUDIO OUT x 1

TUNER/TIMER

TV channel storage capacity	: 99 positions (+AUX position)
Tuning system	: Frequency synthesized tuner
Channel coverage	: VHF 47 – 89/104 – 300/ 302 – 470MHz UHF 470 – 862MHz
Aerial output	: UHF channels 22 – 69 (Adjustable)
Memory backup time	: Approx. 10 min.

ACCESSORIES

Provided accessories	: RF cable, Infrared remote control unit, "R6" battery x 2

Specifications shown are for SP mode unless otherwise specified.
E.& O.E. Design and specifications subject to change without notice.

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No. 82662
June 1998

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4. CHARTS AND DIAGRAMS

4.1 BOARD INTERCONNECTIONS 4-3

The following table indicate main differnt points between models HR-J758E,HR-J758EH,HR-J658E,HR-J658EH and HR-J700E.

ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
POWER SAVE MODE	○	—	○	—	—
NICAM	—	—	—	○	○
FRONT PANEL	SILVER	BLACK	SILVER	←	BLACK

Notes : Mark ○ is used. Mark — is not used. Mark ← is same as left.

The following tables indicate differnt parts number between models HR-J758E,HR-J758EH,HR-J658E,HR-J658EH and HR-J700E.

PACKING AND ACCESSORY ASSEMBLY <M1>

⚠ REF. NO	ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
301	PACKING CASE	LP30423-009B	LP30423-017A	LP30423-023A	LP30423-011B	LP30423-019A
309	CAP(JACK),CONNECTOR COVER	LP30383-002A	—	—	LP30383-002A	—
⚠ 310	INST.BOOK(EN)	LPT0048-001A	LPT0047-001A	←	LPT0048-001A	LPT0047-001A
⚠	INST.BOOK(GE)	LPT0048-002A	LPT0047-002A	←	LPT0048-002A	LPT0047-002A
⚠	INST.BOOK(FR)	LPT0048-003A	LPT0047-003A	←	LPT0048-003A	LPT0047-003A
⚠	INST.BOOK(IT)	LPT0048-004A	LPT0047-004A	←	—	—
⚠	INST.BOOK(SP)	—	—	—	LPT0048-005A	LPT0047-005A
⚠	INST.BOOK(DU)	LPT0048-006A	LPT0047-006A	←	LPT0048-006A	LPT0047-006A
⚠	INST.BOOK(DA)	—	—	—	LPT0048-007A	LPT0047-007A
⚠	INST.BOOK(FI)	—	—	—	LPT0048-008A	LPT0047-008A
⚠	INST.BOOK(SW)	—	—	—	LPT0048-009A	LPT0047-009A
⚠	INST.BOOK(NO)	—	—	—	LPT0048-010A	LPT0047-010A
⚠	INST.BOOK(PT)	—	—	—	LPT0048-011A	LPT0047-011A
⚠	INST.BOOK(GR)	LPT0048-012A	LPT0047-012A	←	—	—
314	SHEET(SPAIN)	—	—	—	PQ45146-138	←

CABINET AND CHASSIS ASSEMBLY <M2>

⚠ REF. NO	ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
⚠ 550	FRONT PANEL ASSY	LP10125-006D	LP10125-008D	LP10125-036D	LP10125-007D	LP10125-009D
550A	CASSETTE DOOR	LP20342-006B	LP20342-009B	LP20342-011B	LP20342-006B	LP20342-009B
550C	DISPLAY WINDOW	LP10343-005A	LP20343-009A	LP20343-012A	LP20343-006A	LP20343-010A
⚠ 551	TOP COVER	PQ11676-51	PQ11676-49	PQ11676-51	←	PQ11676-49
554	KNOB SHUTTLE	LP30120-004A	—	—	LP30120-004A	—
555	KNOB JOG	LP30121-004A	—	—	LP30121-004A	—
556	SCREW,X2 JOG	QYTDSF2608Z	—	—	QYTDSF2608Z	—
WR4	FFC WIRE,SW/DISP CN7162	QUQ212-0514CG	—	—	QUQ212-0514CG	—
WR5	FFC WIRE,JOG CN3006	QUQ112-0718CG	—	—	QUQ112-0718CG	—

Notes : Mark — is not used. Mark ← is same as left.

MAIN BOARD ASSEMBLY <03> (1/2)

⚠ REF. NO	ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	MAIN BOARD ASSY	LPA10014-04B	LPA10014-07C	←	LPA10014-03B	LPA10014-06C
IC2201	IC	AN3665FB-A	AN3665FB	←	AN3665FB-A	AN3665FB
Q6	TRANSISTOR	2SR1218A/QR	—	—	2SR1218A/QR	—
Q38	TRANSISTOR	2SD1819A/QRS	2SC4081/QRS	←	2SD1819A/QRS	2SC4081/QRS
Q39	TRANSISTOR	—	2SA1576A/QR	←	—	2SA1576A/QR
Q102	TRANSISTOR	UN5211	—	—	UN5211	—
Q153	TRANSISTOR	2SD1819A/QRS	—	—	2SD1819A/QRS	—
Q2711	TRANSISTOR	2SC4081/QRS	—	—	2SC4081/QRS	—
Q2712	TRANSISTOR	2SC4081/QRS	—	—	2SC4081/QRS	—
Q2713	TRANSISTOR	DTA114EU	—	—	DTA114EU	—
Q2714	TRANSISTOR	DTC114WU	—	—	DTC114WU	—
Q5301	TRANSISTOR	2SB1256	—	—	2SB1256	—
Q5302	TRANSISTOR	UN5211	—	—	UN5211	—
Q5303	TRANSISTOR	2SB1256	←	←	—	—
Q5312	TRANSISTOR	2SA1745/6-7	←	←	—	—
Q5313	TRANSISTOR	UN5211	←	←	—	—
Q5314	TRANSISTOR	2SA1576A/RS	←	←	—	—
Q5321	TRANSISTOR	UN5111	←	←	—	—
D3011	DIODE	1SS133	—	—	1SS133	—
D3012	DIODE	1SS133	—	—	1SS133	—
D5105	DIODE	1SS133	←	←	—	—
D5209	FR DIODE	10ELS2	—	—	10ELS2	—
D5302	DIODE	11ES2	—	—	11ES2	—
D5308	DIODE	1SS133	←	←	—	—
D5321	DIODE	DAN202V	←	←	—	—
R10	MG RESISTOR	NRSA02J-102X	—	—	NRSA02J-102X	—
R11	MG RESISTOR	NRSA02J-471X	—	—	NRSA02J-471X	—
R124	MG RESISTOR	—	NRSA02J-102X	←	—	NRSA02J-102X
R150	MG RESISTOR	—	NRSA02J-222X	←	—	NRSA02J-222X
R158	MG RESISTOR	NRSA02J-102X	—	—	NRSA02J-102X	—
R2009	MG RESISTOR	—	NRSA02J-101X	←	←	←
R2203	MG RESISTOR	NRSA02J-473X	—	—	NRSA02J-473X	—
R2207	MG RESISTOR	NRSA02J-682X	—	—	NRSA02J-682X	—
R2217	MG RESISTOR	NRSA02J-682X	—	—	NRSA02J-682X	—
R2221	MG RESISTOR	NRSA02J-473X	—	—	NRSA02J-473X	—
R2711	MG RESISTOR	NRSA02J-221X	—	—	NRSA02J-221X	—
R2712	MG RESISTOR	NRSA02J-221X	—	—	NRSA02J-221X	—
R2715	MG RESISTOR	NRSA02J-472X	—	—	NRSA02J-472X	—
R2716	MG RESISTOR	NRSA02J-472X	—	—	NRSA02J-472X	—
R3247	MG RESISTOR	—	NRSA02J-103X	←	—	NRSA02J-103X
R3248	MG RESISTOR	—	NRSA02J-103X	←	—	NRSA02J-103X
R5112	RESISTOR	QRE141J-221Y	←	←	—	—

Notes : Mark — is not used. Mark ← is same as left.

MAIN BOARD ASSEMBLY <03> (2/2)

⚠ REF. NO	ITEM / MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
R5301	MG RESISTOR	NRSA02J-3R3X	NRSA02J-5R6X	←	NRSA02J-3R3X	NRSA02J-5R6X
R5302	MG RESISTOR	NRSA02J-3R3X	NRSA02J-5R6X	←	NRSA02J-3R3X	NRSA02J-5R6X
R5303	MG RESISTOR	NRSA02J-3R3X	NRSA02J-5R6X	←	NRSA02J-3R3X	NRSA02J-5R6X
R5304	MG RESISTOR	NRSA02J-3R9X	NRSA02J-5R6X	←	NRSA02J-3R9X	NRSA02J-8R2X
R5305	RESISTOR	QRE141J-102X	←	←	—	—
R5308	MG RESISTOR	NRSA02J-472X	—	—	NRSA02J-472X	—
R5309	MG RESISTOR	NRSA02J-222X	—	—	NRSA02J-222X	—
R5310	MG RESISTOR	NRSA02J-472X	←	←	—	—
R5311	MG RESISTOR	NRSA02J-222X	←	←	—	—
R5335	MG RESISTOR	NRSA02J-472X	←	←	—	—
R5336	MG RESISTOR	NRSA02J-222X	←	←	—	—
R5337	MG RESISTOR	NRSA02J-222X	←	←	—	—
R5338	MG RESISTOR	NRSA02J-273X	←	←	—	—
R5339	MG RESISTOR	NRSA02J-273X	←	←	—	—
R5352	MG RESISTOR	NRSA02J-473X	←	←	—	—
R6032	MG RESISTOR	—	—	—	NRSA02J-472X	←
R6033	MG RESISTOR	—	—	—	NRSA02J-182X	←
R7168	MG RESISTOR	NRSA02J-750X	—	—	NRSA02J-750X	—
C35	CAPACITOR	—	NCB21HK-103X	←	—	NCB21HK-103X
C38	CAPACITOR	NDC21HJ-8R0X	—	—	NDC21HJ-8R0X	—
C39	CAPACITOR	NDC21HJ-220X	—	—	NDC21HJ-220X	—
C52	E CAPACITOR	QEKJ1HM-105	—	—	QEKJ1HM-105	—
C73	CAPACITOR	NCB21HK-103X	—	—	NCB21HK-103X	—
C74	MG RESISTOR	NRSA02J-0R0X	—	—	NRSA02J-0R0X	—
C105	CAPACITOR	QDYB1CN-103Y	—	—	QDYB1CN-103Y	—
C127	CAPACITOR	NCB21CK-474X	—	—	NCB21CK-474X	—
C2011	CAPACITOR	—	NCB21EK-333X	←	←	←
C2233	E CAPACITOR	QEKJ1HM-105	—	—	QEKJ1HM-105	—
C2234	E CAPACITOR	QEKJ1HM-105	—	—	QEKJ1HM-105	—
C3004	EDL CAPACITOR	QEZ0244-229	QETN0JM-228	←	QEZ0244-229	QETN0JM-228
C5206	E CAPACITOR	QEMU1EM-187	—	—	QEMU1EM-187	—
C6031	E CAPACITOR	—	—	—	QETC1HM-106	←
C6032	CAPACITOR	—	—	—	NCB21EK-333X	←
L5	COIL	QQL071J-820Y	—	—	QQL071J-820Y	—
L6	COIL	QQL071J-101Y	—	—	QQL071J-101Y	—
L6031	COIL	—	—	—	QQL29BK-1R0Z	←
⚠ PC5301	PH COUPLER	PS2501-1	←	—	—	—
⚠ T5001	SW TRANSF	QQS0027-001	←	QQS0021-001	←	←
J7108	MINI JACK, RP I/O	PU61012	—	—	PU61012	—
CN3006	FPC CONNECTOR, (1-7)JOG/SHUTTLE	QGF1207C1-07	—	—	QGF1207C1-07	—
CN7162	FPC CONNECTOR, (1-5)FRONT	QGF1207C1-05	—	—	QGF1207C1-05	—

Notes : Mark — is not used. Mark ← is same as left.

TERMINAL BOARD ASSEMBLY <06>

⚠ REF. NO	ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	TERMINAL BOARD ASSY	LPA10016-04B1	LPA10016-07B1	←	LPA10016-03B1	LPA10016-06B1
D7132	DIODE	1SS133	←	←	—	—
D7133	DIODE	1SS133	←	←	—	—
R7147	MG RESISTOR	NRSA02J-822X	←	←	—	—
R7148	MG RESISTOR	NRSA02J-123X	←	←	—	—
R7149	MG RESISTOR	NRSA02J-822X	←	←	—	—
R7150	MG RESISTOR	NRSA02J-123X	←	←	—	—
TB1	TERMINAL BOARD ASSY	LP30361-003A	LP30361-005A	←	LP30361-003A	LP30361-005A

DEMOD BOARD ASSEMBLY <14> (1/2)

⚠ REF. NO	ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	DEMOD BOARD ASSY	LPA10030-01A	←	←	LPA10021-01A	←
IC6701	IC	TDA9821/V1	←	←	MSP3415D	←
IC6702	IC	TDA9840	←	←	—	—
Q6701	TRANSISTOR	DTC144EU	←	←	2SC3068	←
Q6702	TRANSISTOR	DTC144EU	←	←	2SC3354/TS	←
Q6704	TRANSISTOR	—	—	—	DTC114EU	←
Q6705	TRANSISTOR	—	—	—	DTC114EU	←
D6701	DIODE	1N4148M	←	←	—	—
D6702	ZENER DIODE	—	—	—	MTZJ9.1B	←
D6703	DIODE	—	—	—	1N4148M	←
D6704	DIODE	—	—	—	1N4148M	←
R6701	MG RESISTOR	NRSA02J-331X	←	←	NRSA02J-101X	←
R6702	MG RESISTOR	NRSA02J-273X	←	←	NRSA02J-101X	←
R6703	MG RESISTOR	—	—	—	NRSA02J-271X	←
R6704	MG RESISTOR	NRSA02J-152X	←	←	NRSA02J-101X	←
R6705	MG RESISTOR	NRSA02J-331X	←	←	NRSA02J-472X	←
R6706	MG RESISTOR	NRSA02J-101X	←	←	NRSA02J-392X	←
R6707	MG RESISTOR	NRSA02J-101X	←	←	NRSA02J-470X	←
R6708	MG RESISTOR	NRSA02J-103X	←	←	NRSA02J-102X	←
R6709	MG RESISTOR	NRSA02J-392X	←	←	NRSA02J-271X	←
R6710	MG RESISTOR	NRSA02J-102X	←	←	NRSA02J-151X	←
R6711	MG RESISTOR	NRSA02J-392X	←	←	—	—
R6713	MG RESISTOR	NRSA02J-273X	←	←	NRSA02J-103X	←
R6716	MG RESISTOR	—	—	—	NRSA02J-102X	←
R6718	MG RESISTOR	—	—	—	NRSA02J-684X	←
VR6701	V RESISTOR	QVZ3521-222Z	←	←	—	—
C6701	CAPACITOR/E CAPACITOR	QEKJ1CM-106	←	←	NDC21HJ-101X	←
C6702	CAPACITOR	NCB21HK-103X	←	←	NDC21HJ-101X	←

Notes : Mark — is not used. Mark ← is same as left.

DEMOD BOARD ASSEMBLY <14> (2/2)

⚠ REF. NO	ITEM \ MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
C6703	E CAPACITOR	QEKJ1HM-225	←	←	QEKJ1CM-336	←
C6704	E CAPACITOR	QEKJ1HM-225	←	←	QEKJ1CM-107	←
C6705	E CAPACITOR/CAPACITOR	QEKJ1HM-225	←	←	NCB21HK-103X	←
C6706	CAPACITOR	NCB21HK-103X	←	←	NCB21HK-223X	←
C6707	CAPACITOR	NDC21HJ-101X	←	←	NCB21HK-103X	←
C6708	CAPACITOR	NDC21HJ-101X	←	←	NCB21HK-103X	←
C6709	E CAPACITOR	QEKJ1CM-106	←	←	QEKJ1CM-336	←
C6710	CAPACITOR	NCB21HK-103X	←	←	NCB21HK-682X	←
C6711	CAPACITOR	NCB21HK-103X	←	←	NCB21HK-682X	←
C6712	CAPACITOR/E CAPACITOR	NCB21HK-103X	←	←	QEKJ1HM-225	←
C6713	E CAPACITOR	QEKJ1CM-106	←	←	QEKJ1HM-225	←
C6714	CAPACITOR/E CAPACITOR	QEKJ1CM-106	←	←	NCB21HK-103X	←
C6715	E CAPACITOR	QEKJ1CM-106	←	←	—	—
C6716	CAPACITOR	NCB21HK-103X	←	←	—	—
C6717	CAPACITOR/E CAPACITOR	QEKJ1HM-104	←	←	NCB21HK-223X	←
C6718	CAPACITOR/E CAPACITOR	NDC21HJ-181X	←	←	QEKJ1CM-336	←
C6719	E CAPACITOR	QEKJ1CM-336	←	←	QEKJ1CM-106	←
C6720	E CAPACITOR	QEKJ1HM-225	←	←	QEKJ1CM-106	←
C6721	CAPACITOR/E CAPACITOR	QEKJ1HM-225	←	←	NCB21HK-103X	←
C6722	E CAPACITOR	—	—	—	QEKJ1CM-106	←
C6723	CAPACITOR	—	—	—	NCB21HK-103X	←
C6727	CAPACITOR	—	—	—	NDC21HJ-470X	←
C6728	CAPACITOR	—	—	—	NDC21HJ-470X	←
C6729	CAPACITOR	—	—	—	NDC21HJ-8R0X	←
C6730	CAPACITOR	—	—	—	NDC21HJ-1R0X	←
L6702	COIL	QQL29BK-1R0Z	←	←	QQL29BJ-3R3Z	←
L6703	COIL	—	—	—	QQL29BK-1R0Z	←
L6704	COIL	—	—	—	QQL29BK-1R0Z	←
L6705	COIL	—	—	—	QQL29BJ-100Z	←
CF6701	CERAMIC FILTER	PU52775-2	←	←	—	—
CF6702	N FILTER	PU49295-2	←	←	—	—
LC6701	NOISE FILTER	—	—	—	QQR0657-013	←
X6701	CRYSTAL RESONATOR	PEVB0479	←	←	QAX0443-001	←
T6701	LC FILTER	QQR0583-001	←	←	—	—
BK1	BRACKET(BOARD)	—	—	—	LP40077-001A	←
SD1	SHIELD CASE(DEMOD)	LP30478-001A	←	←	—	—

Notes : Mark — is not used. Mark ← is same as left.

SPATIALIZER BOARD ASSEMBLY <24>

⚠ REF. NO	ITEM / MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	SPATIALIZER BOARD ASSY	LPA10022-01A	—	—	LPA10022-01A	—

SW/DISPLAY BOARD ASSEMBLY <28>

⚠ REF. NO	ITEM / MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	DISPLAY BOARD ASSY	LPA10018-07B1	LPA10018-12B1	←	LPA10018-06B1	LPA10018-11B1
D7004	DIODE	1N4148M	—	—	1N4148M	—
D7009	LE DIODE	SLR-342DC3F	—	—	SLR-342DC3F	—
R7009	RESISTOR	QRE141J-153Y	—	—	QRE141J-153Y	—
R7010	RESISTOR	—	—	—	QRE141J-153Y	←
R7040	RESISTOR	QRE141J-331Y	—	—	QRE141J-331Y	—
C7192	CAPACITOR	QCBB1HJ-681	—	—	QCBB1HJ-681	—
C7194	CAPACITOR	QCBB1HJ-681	—	—	QCBB1HJ-681	—
L7191	RESISTOR	QRE141J-101Y	—	—	—	—
DI7001	FL TUBE	QLF0032-002	QLF0031-002	←	QLF0032-002	QLF0031-002
S7006	TACT SWITCH, PLAY	—	QSW0619-002Z	←	—	QSW0619-002Z
S7007	TACT SWITCH, STOP/EJECT	—	QSW0619-002Z	←	—	QSW0619-002Z
S7016	TACT SWITCH, TIME SCAN +	—	QSW0619-002Z	←	—	QSW0619-002Z
S7017	TACT SWITCH, TIME SCAN –	—	QSW0619-002Z	←	—	QSW0619-002Z
HD1	FDP HOLDER(L), DI7001	PQ34668	QLF0031-002	←	PQ34668	QLF0031-002
HD2	FDP HOLDER(R), DI7001	PQ34669	QLF0033-002	←	PQ34669	QLF0033-002
HD3	LED HOLDER, D7009	PQM30038-6	—	—	PQM30038-6	—
J7191	PIN JACK, VIDEO IN	PEMC1009-04	—	—	PEMC1009-04	—
J7192	PIN JACK(SW), AUDIO IN(L)	PEMC1010-03	—	—	PEMC1010-03	—
J7193	PIN JACK(SW), AUDIO IN(R)	PEMC1010-02	—	—	PEMC1010-02	—
CN7191	FCC CONECTOR, (3-7)MAIN	QGF1207C1-05	—	—	QGF1207C1-05	—

JOG BOARD ASSEMBLY <37>

⚠ REF. NO	ITEM / MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	JOG BOARD ASSY	LPA10018-01B3	—	—	LPA10018-01B3	—

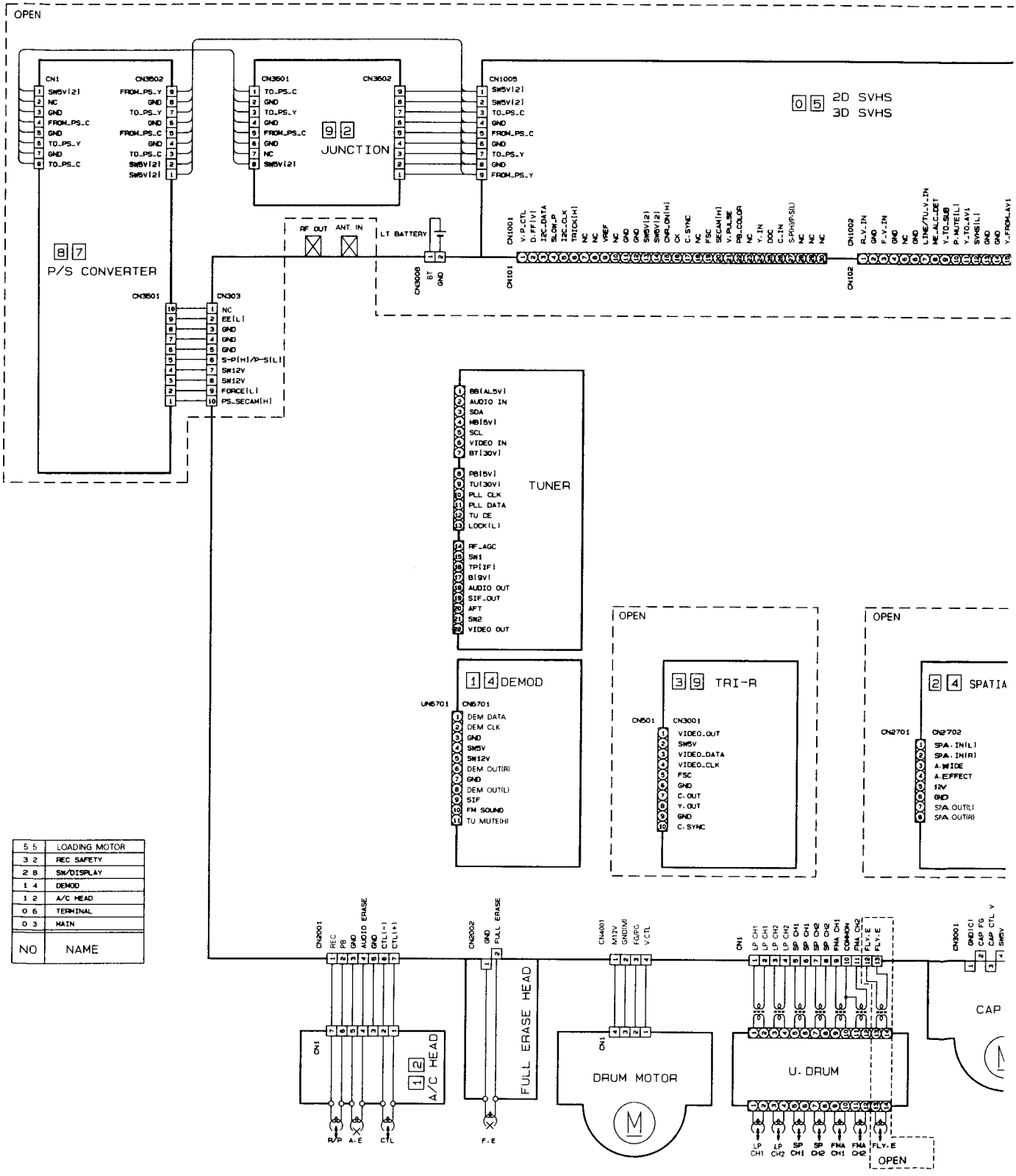
TRI-R BOARD ASSEMBLY <39>

⚠ REF. NO	ITEM / MODEL	HR-J758E	HR-J658E	HR-J700E	HR-J758EH	HR-J658EH
PW1	TRI-R BOARD ASSY	LB11049A-01	—	—	LB11049A-01	—

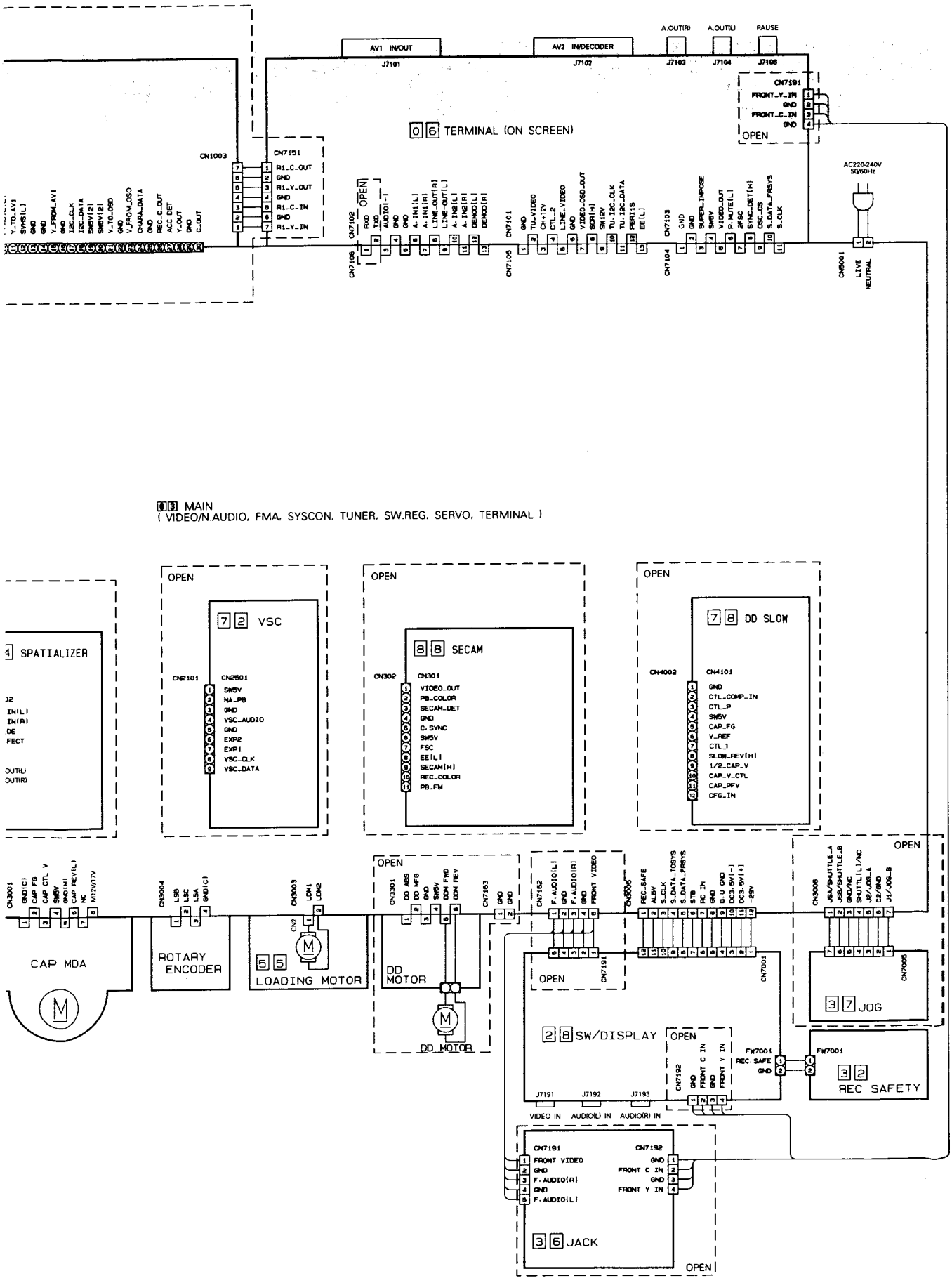
Notes : Mark — is not used. Mark ← is same as left.

SECTION 4
CHARTS AND DIAGRAMS

4.1 BOARD INTERCONNECTIONS



NO	NAME
55	LOADING MOTOR
32	REC SAFETY
28	SW/DISPLAY
14	DEMOD
12	A/C HEAD
06	TERMINAL
03	MAIN


AV1 IN/OUT
J7101
AV2 IN/DECODER
J7102
A.OUT(R)
J7103
A.OUT(L)
J7104
PAUSE
J7105
06 TERMINAL (ON SCREEN)
CN7191
FRONT_Y_IN
GND
FRONT_C_IN
GND
OPEN
CN1003
CN7151
R1_C_OUT
GND
R1_Y_OUT
GND
R1_C_IN
GND
R1_Y_IN
CN7102
CN7106
CN7101
CN7105
CN7103
CN7104
AC220-240V
50/60Hz
CN5001
LIVE
NEUTRAL
03 MAIN
(VIDEO/N.AUDIO, FMA, SYSCON, TUNER, SW.REG, SERVO, TERMINAL)
OPEN
72 VSC
CN2101
CN2501
SW5V
NA_PB
GND
VSC_AUDIO
GND
EXP2
EXP1
VSC_CLK
VSC_DATA
88 SECAM
CN302
CN301
VIDEO_OUT
PB_COLOR
SECAM_DET
GND
C. SYNC
SW5V
FSC
EE(L)
SECAM(H)
REC_COLOR
PB_FM
78 DD SLOW
CN4002
CN4101
GND
CTL_COMP_IN
CTL_P
SW5V
CAP_FG
V_REF
CTL_I
SLOW_REV(H)
1/2_CAP_V
CAP_V_CTL
CAP_PFV
CFG_IN
4 SPATIALIZER
CAP MDA
ROTARY ENCODER
55 LOADING MOTOR
DD MOTOR
CN3001
CN3004
CN3003
CN3301
CN7163
CN7152
CN3005
CN7191
CN7001
CN7005
37 JOG
28 SW/DISPLAY
CN7192
FW7001
32 REC SAFETY
J7191
J7192
J7193
VIDEO IN
AUDIO(L) IN
AUDIO(R) IN
CN7191
FRONT VIDEO
GND
F. AUDIO(R)
GND
F. AUDIO(L)
CN7192
GND
FRONT C IN
GND
FRONT Y IN
36 JACK

[redacted]

JVC

VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

S40894

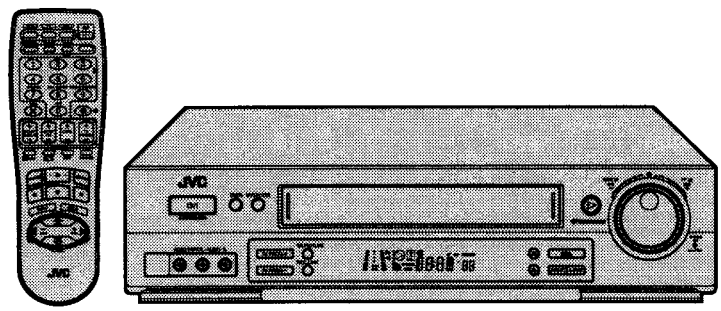
Printed in Japan

JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-J758E/EH



Hi-Fi

VHS PAL

SHOWVIEW

SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-J758E)*

GENERAL

Power requirement	: AC 220 – 240 V~, 50/60 Hz
Power consumption	
Power on	: 24 W
Power off	: 5.5 W
Power save (HR-J758E only)	: 3 W
Temperature	
Operating	: 5°C to 40°C
Storage	: –20°C to 60°C
Operating position	: Horizontal only
Dimensions (WxHxD)	: 400 x 94 x 347 mm
Weight	: 3.8 kg
Format	: VHS PAL standard
Maximum recording time	
(SP)	: 240 min. with E-240 video cassette
(LP)	: 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	: PAL-type colour signal and CCIR monochrome signal, 625 lines/50 fields
Recording system	: DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	: 45 dB
Horizontal resolution	: 250 lines
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	: 21-pin scart connectors : IN/OUT x 1, IN/DECODER x 1 RCA connectors: VIDEO IN x 1, AUDIO IN x 1, AUDIO OUT x 1

TUNER/TIMER

TV channel storage capacity	: 99 positions (+AUX position)
Tuning system	: Frequency synthesized tuner
Channel coverage	: VHF 47 – 89/104 – 300/302 – 470MHz UHF 470 – 862MHz
Aerial output	: UHF channels 22 – 69 (Adjustable)
Memory backup time	: Approx. 60 min.

ACCESSORIES

Provided accessories	: RF cable, Infrared remote control unit, "R6" battery x 2, Connector cover (for front panel connectors)

Specifications shown are for SP mode unless otherwise specified.
E.& O.E. Design and specifications subject to change without notice.

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No. 82661
May 1998

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The following table lists the differing points between Models (HR-J758E and HR-J758EH) in this series.

	HR-J758E	HR-J758EH
POWER SAVE MODE	○	×
A2 DECODER	×	○

NOTE: × NOT USED ○ USED

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▒) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

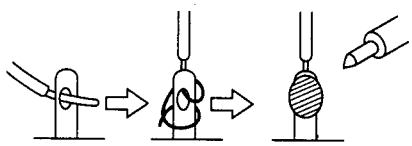


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

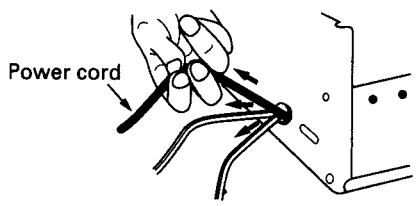


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

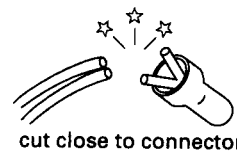


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

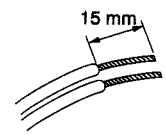


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

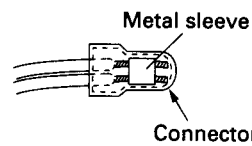


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

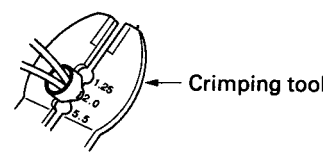


Fig.6

(5) Check the four points noted in Fig.7.

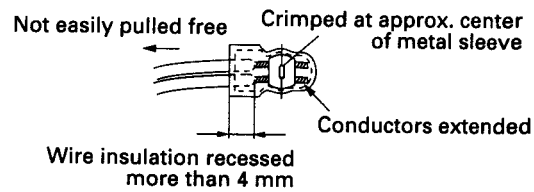

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

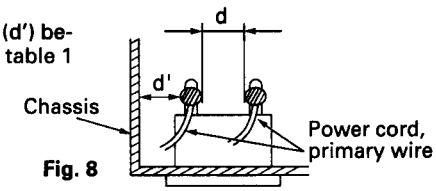


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method : (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

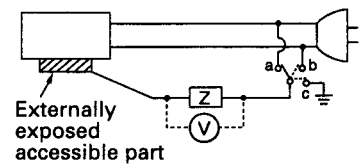


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

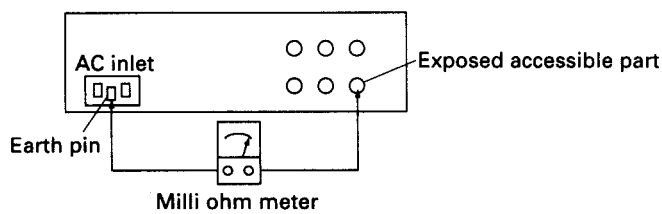


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	–	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION
- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the mains outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the mains outlet prior to connecting or disconnecting any signal lead or aerial.

WARNING
There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).
1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

For Italy:
"It is declared that this product, brand JVC, conforms to the Ministry Decree n. 548 of 28 Aug.'95 published in the Official Gazette of the Italian Republic n. 301 of 28 Dec.'95"

The STANDBY/ON ⏻/I button does not completely shut off mains power from the unit, but switches operating current on and off. " ⏻ " shows electrical power standby and " I " shows ON.

VHS PAL HQ SHOWVIEW

- Cassettes marked "VHS" (or "S-VHS") can be used with this video cassette recorder, however, only VHS signals can be played back and recorded.
- HQ VHS is compatible with existing VHS equipment.
- SHOWVIEW is a registered trademark of Gemstar Development Corporation. The SHOWVIEW system is manufactured under licence from Gemstar Development Corporation.
- Certain audio features of this product manufactured under a license from Desper Products, Inc. Spatializer® is a trademark owned by Desper Products, Inc.

IMPORTANT
- Please read the various precautions on this page before installing or operating the recorder.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

Failure to heed the following precautions may result in damage to the recorder, remote control or video cassette.

1. **DO NOT place the recorder . . .**
   ... in an environment prone to extreme temperatures or humidity.
   ... in direct sunlight.
   ... in a dusty environment.
   ... in an environment where strong magnetic fields are generated.
   ... on a surface that is unstable or subject to vibration.
2. **DO NOT block the recorder's ventilation openings.**
3. **DO NOT place heavy objects on the recorder or remote control.**
4. **DO NOT place anything which might spill on top of the recorder or remote control.**
5. **AVOID violent shocks to the recorder during transport.**

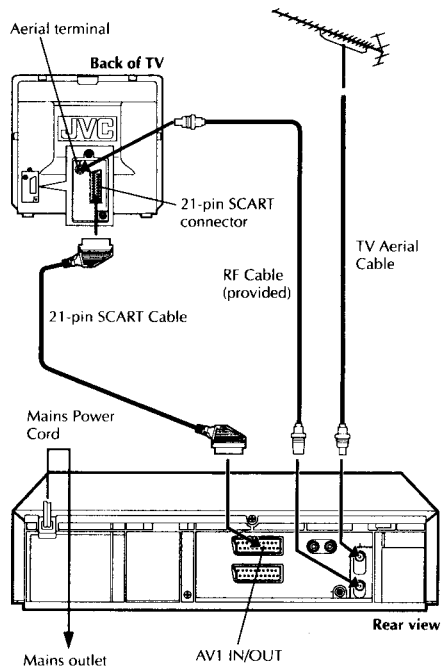
MOISTURE CONDENSATION

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form in the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder turned on for a few hours to let the moisture dry.

ABOUT HEAD CLEANING

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Be sure to contact your nearest JVC dealer if such troubles occur.

Basic Connections



Make AV connection if your TV has a 21-pin AV input connector (SCART) in order to reduce the possibility of interference. And if you are using a stereo TV, you will need this cable in order to enjoy stereo playback of videotapes.

It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.

1 CHECK CONTENTS

Make sure the package contains all of the accessories listed in "Specifications" (☞ pg. 62).

2 SITUATE RECORDER

Place the recorder on a stable, horizontal surface.

3 CONNECT RECORDER TO TV

The connection method you use depends on the type of TV you have.

RF CONNECTION
- *To Connect To A TV With NO AV Input Terminals . . .*
  - **a–** Disconnect the TV aerial cable from the TV.
  - **b–** Connect the TV aerial cable to the ANT. IN jack on the rear panel of the recorder.
  - **c–** Connect the provided RF cable between the RF OUT jack on the rear panel of the recorder and the TV's aerial terminal.

AV CONNECTION
- *To Connect To A TV With AV Input Terminals . . .*
  - **a–** Connect the aerial, recorder and TV as per "RF CONNECTION".
  - **b–** Connect an optional SCART cable between the AV1 IN/OUT socket on the rear panel of the recorder and the TV's 21-pin SCART connector.

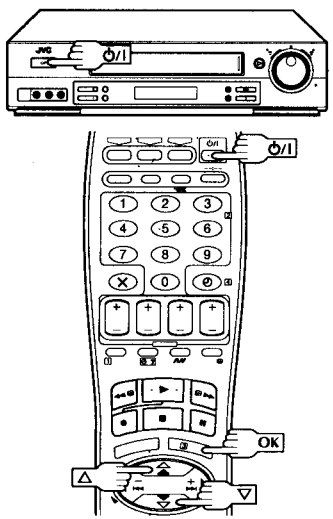
4 CONNECT RECORDER TO MAINS

Plug the end of the mains power cord into a mains outlet.

After you plug the mains power cord into a mains outlet, the Country Set display appears on the TV screen and/or on the recorder's front display panel when the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder; go to page 4 to perform Auto Set Up.

Auto Set Up

Auto Channel Set/Auto Clock Set/Auto Guide Program Number Set/Auto Video Channel Set



International Telephone Country Code			
SUISSE	: 41	SUOMI	: 358
ITALIA	: 39	PORTUGAL	: 351
ESPAÑA	: 34	DEUTSCHLAND	: 49
BELGIUM	: 32	NORGE	: 47
NEDERLAND	: 31	SVERIGE	: 46
GREECE	: 30	DANMARK	: 45
OTHERS	: - -	ÖSTERREICH	: 43

ATTENTION

Once you have performed Auto Set Up, even if the recorder's memory backup has expired, all the stored stations and their Guide Program numbers remain in the recorder's memory and the recorder will not perform Auto Set Up again. You only need to set the clock. (☞ pg. 54)

If you have moved to a different area, perform each setting as required.

- Video Channel setting (for RF connection users) ☞ pg. 45
- Tuner setting ☞ pg. 46
- Clock setting ☞ pg. 54

If a new station starts broadcasting in your area, perform tuner setting (☞ pg. 46) and, if necessary, video channel setting (☞ pg. 45).

When the ⏻/I button on the recorder/remote control is pressed for the first time to power on the recorder after you plug the mains power cord into a mains outlet, the Country Set display will appear on the TV screen and the recorder's front display panel. By simply selecting your country*, the Auto Set Up function sets the tuner channels, clock, Guide Program numbers and video channel** automatically.

* If you live in Belgium (BELGIUM) or Switzerland (SUISSE), you also need to select your area.

** Useful if you have connected the video recorder to your TV via RF connection (☞ pg. 3). Video Channel (RF output channel) is the channel on which your TV receives picture and sound signals from the video recorder through the RF cable.

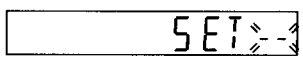
You can refer to the front display panel and/or the on-screen display to perform this procedure.

Before starting, make sure of the following:

- The TV aerial cable should be connected to the recorder.
- The recorder's mains power cord should be connected to a mains outlet. ☞ pg. 3
- If you want to use the on-screen display, the TV should be set to its AV mode (with AV connection ☞ pg. 3) or UHF channel 36 (with RF connection ☞ pg. 3).

1 TURN ON THE RECORDER

Press ⏻/I on the recorder or remote control. The Country Set display appears on the front display panel and/or on the screen.



NOTE:

If you have connected your TV to the recorder with RF connection and the on-screen display appearing on UHF channel 36 looks distorted, perform this procedure referring to the front display panel.

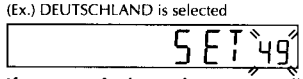
2 SELECT COUNTRY

If you are referring to the front display panel

Press △▽ to select your international telephone country code of your country referring to the chart in the left column.

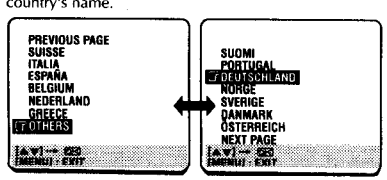
- If you have selected a country code other than 32 (BELGIUM) or 41 (SUISSE), go to step **4**.
- If you have selected 32 (BELGIUM) or 41 (SUISSE), go to step **3**.

(Ex.) DEUTSCHLAND is selected



If you are referring to the on-screen display

Press △▽ to move the highlight bar (pointer) to your country's name.



- If you have selected a country other than BELGIUM or SUISSE, go to step **4**.
- If you have selected BELGIUM or SUISSE, go to step **3**.

3 SELECT LANGUAGE

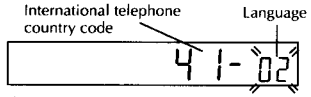
Press **OK**. The Language Set display appears on the front display panel and/or on the screen.

If you are referring to the front display panel

Press △▽ to select your language code.

Language Code			
ENGLISH	: 01	NEDERLANDS	: 06
DEUTSCH	: 02	SVENSKA	: 07
FRANCAIS	: 03	NORSK	: 08
ITALIANO	: 04	SUOMI	: 09
CASTELLANO	: 05	DANSK	: 10

(Ex.) DEUTSCH is selected for SUISSE



If you are referring to the on-screen display

Press △▽ to move the highlight bar (pointer) to the language of your choice.

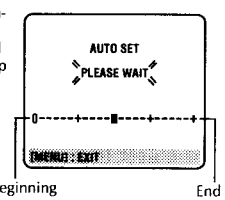
(Ex.) DEUTSCH is selected

4 PERFORM AUTO SET UP

Press **OK**.

"Auto" appears on the display panel and blinks; do NOT press any button on the recorder or remote control until the display panel shows either the display as illustrated in step **5** or "- -:- -".

- If "- -:- -" appears on the display panel, refer to page 6.
- If you are using the on-screen display, the AUTO SET screen will appear. As Auto Set Up progresses, the " ■ " mark on the screen moves from left to right.



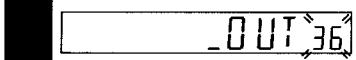
Beginning End

5 CONFIRM/SET VIDEO CHANNEL

If you have connected the video recorder to your TV via an RF cable only (RF connection)

The channel that is shown on the display panel is your Video Channel.

To view picture signals from the video recorder, set your TV to the Video Channel. — Refer to the instructions supplied with your TV set for how to do this.

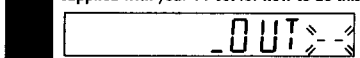


If you have connected the video recorder to your TV via both an RF cable and a 21-pin SCART cable (AV connection)

You do not need the video channel so you have to set the video channel to off.

Press **TV PROG** – until the display panel shows "-OUT- -" to set the Video Channel to off.

To view picture signals from the video recorder, set your TV to its AV mode. — Refer to the instructions supplied with your TV set for how to do this.



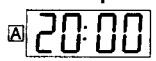
6 FINISH AUTO SET UP

Press **OK** and refer to page 6 to check the results.

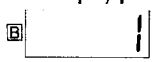
NOTES:

- *Auto channel set function takes place first; it assigns automatically all receivable stations in your area.*
- *Auto clock set function sets the clock automatically by reading the clock setting data from a station transmitting a PDC signal while auto channel set is being performed.*
- *During auto channel set, the recorder recognizes each station name of the detected stations and stores them in the recorder's memory, then automatically sets ShowView assigned Guide Program number for those stations according to the broadcast area.*
- *In the area where no TV station transmits a PDC signal, the recorder can perform neither auto clock set nor auto Guide Program number set.*
- ***For RF connection users:** The video recorder detects the channels which are not occupied by local stations and selects one channel automatically for your Video Channel that is located in the middle of more than 5 vacant channels.*
- *If there is a power cut, or if you press ⏻/I or **MENU** while Auto Set Up is in progress, Auto Set Up will be interrupted; be sure to turn off the recorder power once and try again from step **1**.*

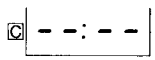
Auto Set Up results appear on the front display panel

A 

When both auto channel set and auto clock set have been completed successfully the correct current time will be displayed after the **OK** button is pressed in step **6** on page 5.

B 

When auto channel set has been completed successfully but auto clock set has not, "1" (channel position) will be displayed after the **OK** button is pressed in step **6** on page 5.

C 

When neither auto channel set nor auto clock set has been completed successfully, "- - : - -" will be displayed.

You can check if the Guide Program numbers have been set correctly when you perform SHOWVIEW Timer Programming (☞ pg. 26); if the correct channel position number is displayed in **step 3**, this confirms that the Guide Program number for the SHOWVIEW number you enter in step **2** has been set correctly.

A If both auto channel set and auto clock set have been performed successfully:

1 Turn on the TV and select its VIDEO channel or AV mode, then make sure that all necessary stations have been stored in the recorder's memory by using the **TV PROG** button(s).
- If station names (ID — ☞ pg. 51) have also been stored in the recorder's memory, the station name will be displayed at the top left corner of the screen for about 5 seconds when the recorder is tuned to a different station.
- If you want to set the tuner manually such as to add or skip channels, to change channel positions, or to set or change station names, see pages 48 – 52.

B If auto channel set has succeeded but auto clock set has not:

1 Turn on the TV and select its VIDEO channel or AV mode, then make sure that all necessary stations have been stored in the recorder's memory by using the **TV PROG** button(s).
- If station names (ID — ☞ pg. 51) have also been stored in the recorder's memory, the station name will be displayed at the top left corner of the screen for about 5 seconds when the recorder is tuned to a different station.
- If you want to set the tuner manually such as to add or skip channels, to change channel positions, or to set or change station names, see pages 48 – 52.

2 Perform "Clock Set" on page 54.

C If both auto channel set and auto clock set have failed:

1 Make sure the TV aerial cable is connected properly to the recorder and turn off the recorder power once, then turn the recorder power back on again.
- The Country Set display appears on the front display panel and/or on the screen; perform steps **2 – 6** on pages 4 – 5 again.

IMPORTANT

- In certain reception conditions, station names may not be stored correctly, and auto Guide Program Number Set may not work properly. If the Guide Program numbers are not set properly, when you timer-record a TV programme using SHOWVIEW, the recorder will record a TV programme of a different station. When programming the timer using SHOWVIEW, be sure to check whether the channel position on which your recorder receives the broadcasting station you wish to record is selected (☞ pg. 26, "SHOWVIEW Timer Programming").
- Your video recorder memorizes all detected stations even if reception of some of them is poor. In these cases picture quality may be poor. To delete those stations with an unacceptable picture ☞ "Delete A Channel" on page 49.
- **For RF connection users:** In certain reception conditions, the Video Channel may not be set correctly and interference may appear in the TV picture while the recorder's power is on. Set your Video Channel manually. ☞ pg. 45, "Video Channel Set".

INFORMATION

Language for the on-screen display

Auto Set Up also selects the language automatically for the on-screen display depending on the Country setting you have made in step **2** on page 4 (unless you have selected BELGIUM or SUISSE), as shown below.

SUOMI	→ SUOMI	SVERIGE	→ SVENSKA	ESPAÑA	→ CASTELLANO
PORTUGAL	→ ENGLISH	DANMARK	→ DANSK	NEDERLAND	→ NEDERLANDS
DEUTSCHLAND	→ DEUTSCH	ÖSTERREICH	→ DEUTSCH	GREECE	→ ENGLISH
NORGE	→ NORSK	ITALIA	→ ITALIANO	OTHERS	→ ENGLISH

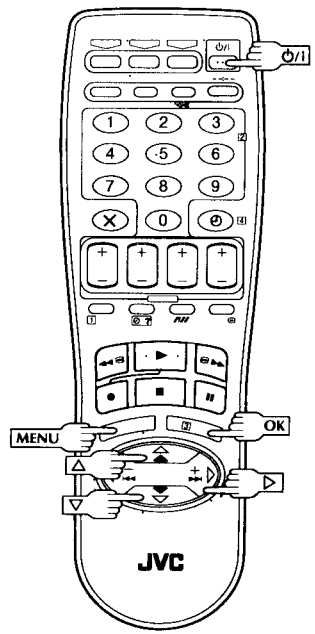
If you want to change the language setting manually, ☞ "Language" on page 7.

Just Clock

Your recorder is equipped with the Just Clock function which provides accurate time keeping through automatic adjustments at regular intervals, by reading data from a PDC signal. If you want to take advantage of this function, simply set it to "ON". ☞ "Just Clock" on page 54.

Language

Turn on the TV and select the VIDEO channel (or AV mode).



This recorder offers you the choice to view on-screen messages in 10 different languages. Though Auto Set Up selects the language automatically (☞ pg. 6), you can change the language setting manually using this procedure as required.

1 TURN ON THE RECORDER

Press ⏻/I.

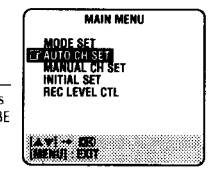
2 ACCESS MAIN MENU

Press **MENU**.

3 ACCESS COUNTRY SET SCREEN

Press △▽ to move the highlight bar (pointer) to "AUTO CH SET", then press **OK** or ▷.

- "REC LEVEL CTL" appears only with the HR-DD858E and HR-DD858EH.



4 SELECT COUNTRY

Press △▽ to move the highlight bar (pointer) to your country's name, then press **OK** or ▷.

5 SELECT LANGUAGE

Press △▽ to move the highlight bar (pointer) to the language of your choice.

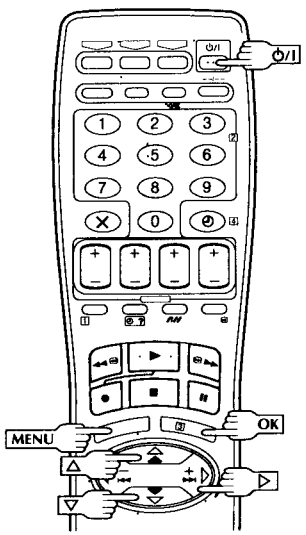
- You do not have to press **OK**; pressing **OK** starts Auto Channel Set.

6 RETURN TO NORMAL SCREEN

Press **MENU**.

On-Screen Displays

Turn on the TV and select the VIDEO channel (or AV mode).



You can choose whether or not to have various operational indicators appear on screen, by setting this function ON or OFF. Messages appear in the selected language (☞ pg. 6 or 7).

1 TURN ON THE RECORDER

Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

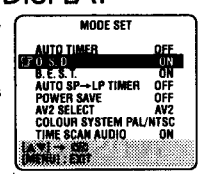
Press **MENU**.

3 ACCESS MODE SET SCREEN

Move the highlight bar (pointer) to "MODE SET" by pressing △▽, then press **OK** or ▷.

4 ENABLE/DISABLE ON-SCREEN DISPLAY

The default setting is "ON", so if you want on-screen displays, leave the setting as it is and go to step 5. If you don't want the displays to appear, press △▽ to move the highlight bar (pointer) to "O.S.D." and press **OK** or ▷ to set "O.S.D." to "OFF".



- "POWER SAVE" appears only with the HR-J758E and HR-DD858E.
- "TIME SCAN AUDIO" appears only with the HR-DD858E and HR-DD858EH.

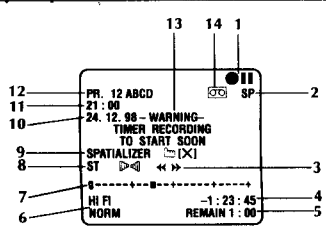
5 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *When you use this recorder as the player for editing, be sure to set "O.S.D." to "OFF" before starting.*
- *During playback, the operation mode indicators may be disturbed depending on the type of tape being used.*

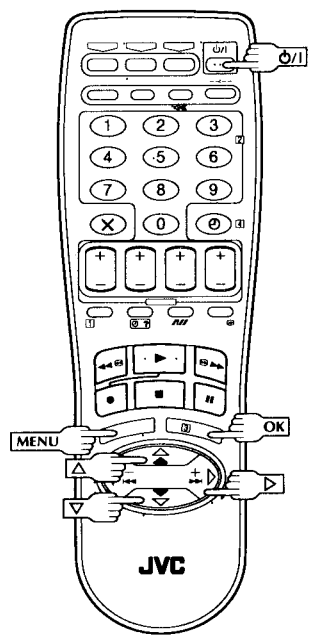
The superimposed indication on the TV screen tells you what the recorder is doing.



1– Operation mode indicators
2– Tape speed SP/LP/EP (EP is for NTSC playback only)
3– Tape direction
4– Counter display
5– Tape remaining time indicator (☞ pg. 21)
6– Audio mode display (☞ pg. 16)
7– Tape position indicator (☞ pg. 11)
8– Type of Broadcast (☞ pg. 22)
9– Spatializer* indicator (☞ pg. 16)
10– Current day/month/year
11– Clock display
12– Channel position number and station name/Aux. indicator (L-1, L-2 or F-1)
13– Timer warning display (☞ pg. 27, 29)
14– Cassette loaded mark

Power Save Mode (HR-J758E and HR-DD858E only)

Turn on the TV and select the VIDEO channel (or AV mode).



You can reduce the power consumption while the recorder is turned off.

1 TURN ON THE RECORDER

Press ⏻/I.

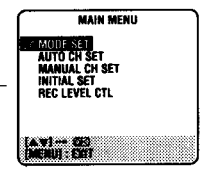
2 ACCESS MAIN MENU SCREEN

Press **MENU**.

3 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.

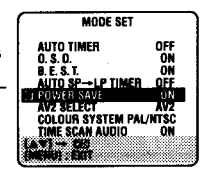
- "REC LEVEL CTL" appears only with the HR-DD858E.



4 SELECT POWER SAVE MODE

Press △▽ to move the highlight bar (pointer) to "POWER SAVE", then press **OK** or ▷ to set to "ON".

- "TIME SCAN AUDIO" appears only with the HR-DD858E .



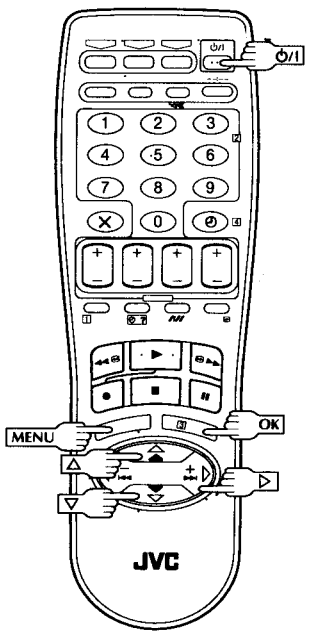
5 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *During Power Save, the display panel will be turned off.*
- *The Just Clock function (☞ pg. 54) does not work while the Power Save mode is engaged.*
- *While the recorder is in the Power Save mode, the picture may be distorted momentarily when you turn on/off the recorder.*
- *Power Save does not work when ...*
  - *... the recorder is in the Timer mode.*
  - *... the recorder's power is turned off after timer-recording (or Instant Timer Recording).*
  - *... the Auto Satellite Prog Recording mode is engaged (☞ pg. 32).*
  - *... "AV2 SELECT" is set to "DECODER" (☞ pg. 37).*

Colour System Set



You can play back PAL, NTSC and MESECAM tapes, or record PAL and SECAM* signals on this recorder. Follow the procedure below to select the appropriate colour system.

* SECAM signals will be recorded as MESECAM on this recorder; MESECAM is the designation for tapes with SECAM signals that have been recorded on a MESECAM-compatible PAL video cassette recorder.

1 TURN ON THE RECORDER

Press ⏻/I.

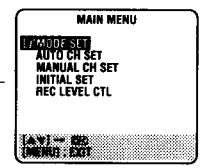
2 ACCESS MAIN MENU SCREEN

Press **MENU**.

3 ACCESS MODE SET SCREEN

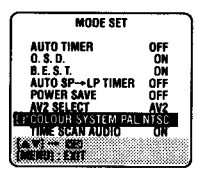
Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.

- "REC LEVEL CTL" appears only with the HR-DD858E and HR-DD858EH.



4 SELECT COLOUR SYSTEM MODE

Press △▽ to move the highlight bar (pointer) to "COLOUR SYSTEM", then press **OK** or ▷ to select the appropriate colour system.



a- PAL/NTSC: To record PAL signals, or play back a PAL or NTSC tape.
b- MESECAM: To record SECAM signals, or play back a MESECAM tape.

- "POWER SAVE" appears only with the HR-J758E and HR-DD858E.
- "TIME SCAN AUDIO" appears only with the HR-DD858E and HR-DD858EH.

5 RETURN TO NORMAL SCREEN

Press **MENU**.

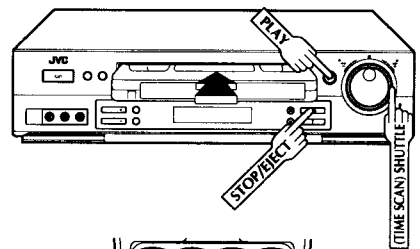
NOTES:

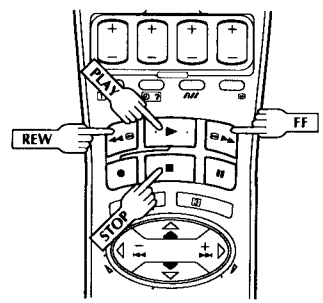
About NTSC Playback

- *Some TVs shrink the picture vertically and place black bars at the top and bottom of the screen. This is not a malfunction on the part of either the video recorder or the TV.*
- *The picture may roll up and down. This can be corrected using the V-HOLD control found on some TVs. (This cannot be corrected if the TV does not have a V-HOLD control.)*
- *The counter and tape remaining time readings will be incorrect.*
- *During search, still, or frame-by-frame playback, the picture will be distorted, and there may be a loss of colour.*
- *Depending on the type of TV, the top and bottom portions of superimposed displays may be cut off during NTSC playback.*

Basic Playback

Turn on the TV and select the VIDEO channel (or AV mode).

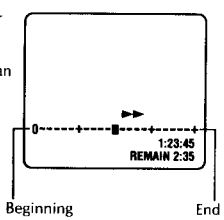




Tape Position Indicator

The tape position indicator appears on screen when, from the Stop mode, you press **FF**, **REW** or perform an Index Search. The position of "■" in relation to "0" (beginning) or "+" (end) shows you where you are on the tape.

"O.S.D." (☞ pg. 8) must be set to "ON", or the indicator will not appear.



NOTE:

Depending on the type of tape used, there may be times when the indication is not correct.

The easiest, most basic operation possible with your video recorder is tape playback. Already-recorded signals on a video tape are read by your video recorder and displayed on your TV just like a TV programme.

1 LOAD A CASSETTE

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is point toward the recorder. Don't apply too much pressure when inserting.

- The recorder power comes on automatically and the counter is reset to 0:00:00.
- If the record safety tab has been removed, playback begins automatically.

2 FIND PROGRAMME START POINT

If the tape is advanced past the start point, press **REW** or turn the (**TIME SCAN**) **SHUTTLE** ring to the left.
To go forward, press **FF** or turn the (**TIME SCAN**) **SHUTTLE** ring to the right.

- The HR-J758E/EH have a standard SHUTTLE ring and the HR-DD858E/EH have a TIME SCAN SHUTTLE ring.

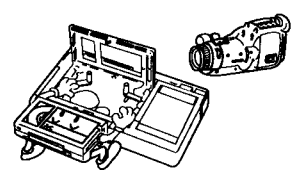
3 START PLAYBACK

Press **PLAY**. "BEST" appears blinking in the recorder's display panel during automatic tracking. (☞ pg. 24)

4 STOP PLAYBACK

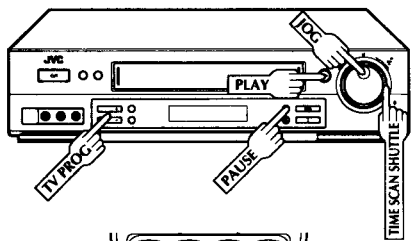
Press **STOP** on the remote or **STOP/EJECT** on the recorder's front panel. Then press **STOP/EJECT** to remove the cassette.

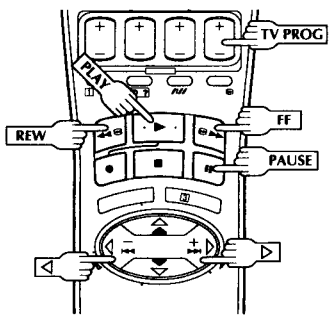
Usable cassettes



- Compact VHS camcorder recordings can be played on this video recorder. Simply place the recorded cassette into a VHS Cassette Adapter and it can be used just like any full-sized VHS cassette.
- This video recorder can record on regular VHS and Super VHS cassettes. However, it will record and play back regular VHS signals only. It is not possible to play back a recorded Super VHS tape.

Playback Features





High-Speed (Turbo) Search (For HR-DD858E/EH)

1 ACTIVATE HIGH-SPEED SEARCH

During playback or still picture, press **FF** for forward high-speed search, or **REW** for reverse high-speed search.

To resume normal playback, press **PLAY**.

NOTE:

*For short searches, press and hold **FF** or **REW** for over 2 seconds during playback or still picture. When released, normal playback resumes.*

ATTENTION

- Picture may not appear during high-speed search with an LP-recorded tape.
- In the high-speed search, still, or frame by frame playback mode, the picture may be distorted, and there may be a loss of colour.

Still Picture/Frame-By-Frame Playback (For HR-DD858E/EH)

1 PAUSE DURING PLAYBACK

Press **PAUSE**. If there is vertical jitter, use the **TV PROG** buttons to correct the picture.

- During still picture, the sound from the previous 3 seconds (approx.) will be played back repeatedly (provided there was at least 6 seconds of normal playback prior to engaging the still picture mode).
- "TIME SCAN AUDIO" must be set to "ON", or the sound will not be heard. (☞ pg. 19)

2 ACTIVATE FRAME-BY-FRAME PLAYBACK

Turn the **JOG** dial to the right for forward frame-by-frame playback, or to the left for reverse frame-by-frame playback.

OR

Press **PAUSE**.

OR

Press ◁ or ▷.

To resume normal playback, press **PLAY**.

Slow Motion (For HR-DD858E/EH)

1 ACTIVATE SLOW-MOTION PLAYBACK

Turn the **TIME SCAN SHUTTLE** ring to the left or press ◁ during playback to decrease speed in the forward direction. To play in reverse slow-motion (and in reverse play mode), continue to turn the **TIME SCAN SHUTTLE** ring to the left or press ◁ after selecting all the forward direction slow-motion modes.

OR

During still picture, turn the **TIME SCAN SHUTTLE** ring to the right for forward slow motion, or to the left for reverse slow motion.

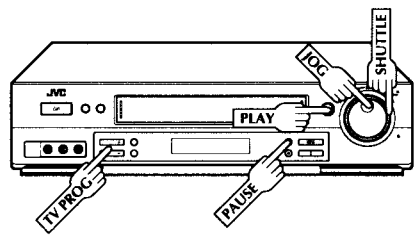
OR

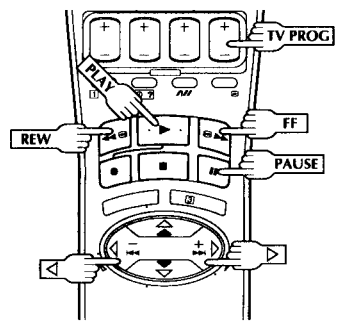
During still picture, press and hold **PAUSE** for 2 seconds, then release. Press and release again to return to still picture.

OR

During still picture, press and hold ◁ or ▷. Release to return to still picture.

To resume normal playback, press **PLAY**.





High-Speed (Turbo) Search (For HR-J758E/EH)

1 ACTIVATE HIGH-SPEED SEARCH

During playback or still, turn the **SHUTTLE** ring all the way to the right for forward high-speed search, or to the left for reverse high-speed search. Releasing **SHUTTLE** resumes still picture playback.

OR

- For forward high-speed search, turn the **SHUTTLE** ring all the way to the right and release it within 1 second.
- For reverse high-speed search, turn the **SHUTTLE** ring all the way to the left and release it within 1 second.

OR

Press **FF** for forward high-speed search, or **REW** for reverse high-speed search.

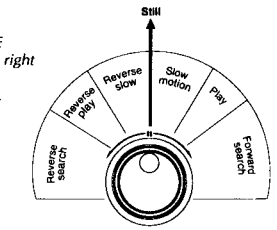
To resume normal playback, press **PLAY**.

NOTE:

*For short searches, press and hold **FF** or **REW** for over 2 seconds during playback or still picture. When released, normal playback resumes.*

NOTE:

*Refer to the **SHUTTLE** ring illustration to the right as you read the following procedures.*



Still Picture/Frame-By-Frame Playback (For HR-J758E/EH)

1 PAUSE DURING PLAYBACK

Press **PAUSE.** If there is vertical jitter, use the **TV PROG** buttons to correct the picture.

2 ACTIVATE FRAME-BY-FRAME PLAYBACK

Turn the **JOG** dial to the right for forward frame-by-frame playback, or to the left for reverse frame-by-frame playback.

OR

Press **PAUSE**.

OR

Press ◁ or ▷.

To resume normal playback, press **PLAY**.

Slow Motion (For HR-J758E/EH)

1 ACTIVATE SLOW-MOTION PLAYBACK

During playback or still, turn the **SHUTTLE** ring to the right for forward slow motion, or to the left for reverse slow motion (refer to the illustration above).

OR

During still picture, press and hold **PAUSE** for 2 seconds, then release. Press and release again to return to still picture.

OR

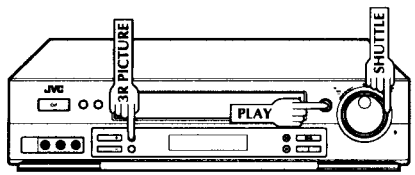
During still picture, press and hold ◁ or ▷. Release to return to still picture.

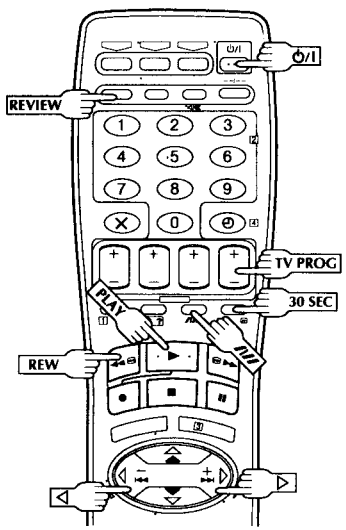
To resume normal playback, press **PLAY**.

ATTENTION

In the search, still, slow-motion or frame-by-frame playback mode,

- the picture will be distorted.
- the noise bars will appear.
- there will be a loss of colour with an LP-recorded tape.





3R Picture

3R(= Resolution and Response Recovery technology) maximises sense of resolution and sharpens image edges to make playback picture look better focused.

1 ACTIVATE 3R PICTURE

Press **3R PICTURE**. The button will light.

- To turn off 3R Picture, press **3R PICTURE** again so that the light goes off.
- Normally it is recommendable to keep 3R Picture ON (with the button lit).
- Depending on the type of tape used, picture quality may be better with 3R Picture set to off.
- If you use this recorder as the player for editing, be sure to turn off **3R Picture** before starting.
- The setting will remain effective even though you turn on/off the recorder.

Variable-Speed Search (For HR-J758E/EH)

If you own the HR-DD858E/EH, see page 18.

1 ACTIVATE VARIABLE-SPEED SEARCH

During playback or still, turn the **SHUTTLE** ring to the right for forward variable-speed search, or to the left for reverse variable-speed search (refer to the illustration on page 13).

OR

During playback, press ◁ or ▷.

- The more times you press, the faster the playback picture moves.
- To decrease speed, press the button for the opposite direction.

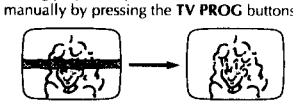
To resume normal playback, press **PLAY**.

NOTE:

In the search, still, or frame by frame playback mode, the picture will be distorted, and there will be a loss of colour.

Manual Tracking

Your video recorder is equipped with automatic tracking control. During playback, you can override this and adjust the tracking manually by pressing the **TV PROG** buttons.



1 OVERRIDE AUTOMATIC TRACKING

Press **///** on the remote to engage manual tracking.

2 ADJUST TRACKING MANUALLY

Press **TV PROG** + or – to adjust tracking.

3 RETURN TO AUTOMATIC TRACKING

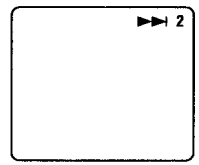
Press **///** on the remote to re-engage automatic tracking.

NOTE:

When a new tape is inserted, the recorder enters the automatic tracking mode automatically.

Index Search

Your recorder automatically marks index codes at the beginning of each recording. This function gives you quick access to any one of 9 index codes in either direction.



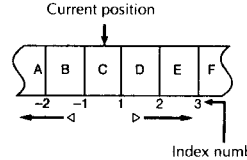
NOTE:

Before starting, make sure the recorder is in the Stop mode.

1 ACTIVATE INDEX SEARCH

Press ◁ or ▷ (|◀◀ or ▶▶|). "|◀◀ 1" or "▶▶| 1" is displayed on screen and search begins in the corresponding direction.

- To access index codes 2 through 9, press ◁ or ▷ repeatedly until the correct index number is displayed.
  Ex.: To locate the beginning of B from the current position, press ◁ twice.
  To locate the beginning of D from the current position, press ▷ once.



- When the specified index code is located, playback begins automatically.

Skip Search

1 SKIP OVER UNWANTED SECTIONS

Press **30 SEC** 1 to 4 times during playback. Each press initiates a 30-second period of fast-motion playback. Normal playback resumes automatically.

NOTE:

*To return to normal playback during a Skip Search, press **PLAY**.*

Instant ReView

Simply by pressing a single button, the recorder power comes on, rewinds, and begins playback of the last timer-recorded programme. If you have several programmes recorded, you can easily access any of them.

NOTE:

Before starting, make sure that the recorder is off and that the Timer mode is disengaged.

1 ACTIVATE INSTANT REVIEW

Press **REVIEW**. The recorder power comes on and the recorder searches for the index code indicating the start of the last timer-recorded programme. Once it's found, playback begins automatically.

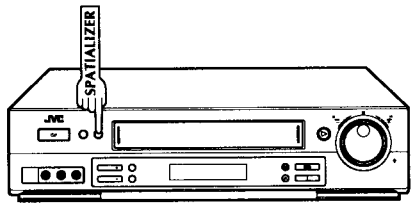
- The front display panel tells you how many programmes have been timer-recorded. If you have, for example, 3 programmes, "REVIEW" and "3" appear and blink. To watch the first of the 3 programmes, press **REVIEW** three times. The recorder searches and begins playback automatically. You can access a programme as far as 9 index codes away from the current tape position.

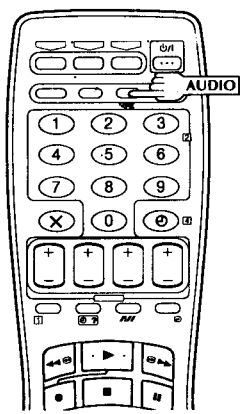
NOTES:

- *Instant ReView is not possible while the recorder is in the Timer mode.*
- *The number of recorded programmes will not be displayed on the front display panel after Auto Satellite Prog recording (☞ pg. 32).*

Next Function Memory

You can set your recorder's power to go off automatically after the tape is fully rewound. Before starting, make sure the recorder is in the Stop mode.
For Automatic Power Off After Tape Rewind . . .
. . . press **REW**, then press ⏻/I within 2 seconds.





Spatializer®

This feature expands sound field when you play back any stereo source or view a stereo programme while recording it.
*Spatializer® has no effect on recording quality.

1 ACTIVATE SPATIALIZER®

Press **SPATIALIZER**; the current setting will be displayed on the screen for about 5 seconds. Pressing **SPATIALIZER** while the screen shows the display changes the setting.

- To view a stereo programme such as movies or music, select "SPATIALIZER" to create more spacious sound.
- To view a monaural programme, select "SPATIALIZER→ST" which simulates a stereo effect.
- Select "SPATIALIZER OFF" to turn off Spatializer® if the sound becomes unnatural with either "SPATIALIZER" or "SPATIALIZER→ST" selected.
- If your TV is equipped with 3D-PHONIC and if you use both Spatializer® and 3D-PHONIC at the same time, the sound may become unnatural; set either function to "OFF".
- The setting will remain effective even though you turn on/off the recorder.

NOTES:

- *Spatializer® is effective only with a stereo TV.*
- *You can change the Spatializer® setting even though "O.S.D." is set to "OFF".*
- *The setting cannot be changed during search, still, frame-by-frame playback or slow motion mode.*
- *When this recorder is used as the player for editing, the recorded audio will correspond to the Spatializer® setting.*

Soundtrack Selection

Your video recorder is capable of recording three soundtracks (HI-FI L, HI-FI R and NORM) and will play back the one you select.

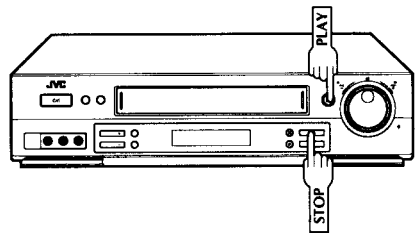
During Playback

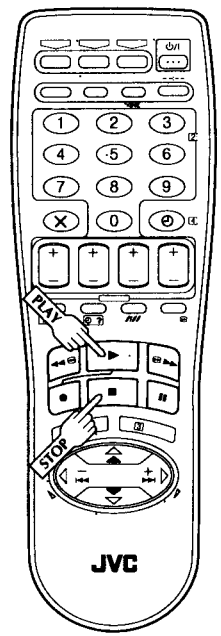
Pressing **AUDIO** on the remote control changes the soundtrack being played back as follows:

TRACK		USE
Recorder's Front Panel	On-Screen Display	
+	HI FI L R	For Hi-Fi stereo tapes
	HI FI L	For main audio of Bilingual tapes
	HI FI R	For sub audio of Bilingual tapes
NORM	NORM	For audio-dubbed tapes
+ + NORM	HI FI NORM	For audio-dubbed tapes

NOTES:

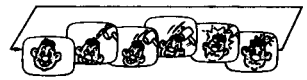
- *" + " should normally be selected. In this mode, Hi-Fi stereo tapes are played back in stereo, and the normal audio track is played back automatically for tapes with only normal audio.*
- *For instructions on recording stereo and bilingual programmes, refer to page 22.*
- *"O.S.D." must be set to "ON" or the on-screen displays will not appear (☞ pg. 8).*





Repeat Playback

Your video recorder can automatically play back the whole tape 50 times repeatedly.



1 START PLAYBACK

Press **PLAY**.

2 ACTIVATE REPEAT PLAYBACK

Press **PLAY** and hold for over 5 seconds, then release.

- The Play indicator (▷) on the display panel blinks slowly.
- The tape plays 50 times automatically, and then stops.

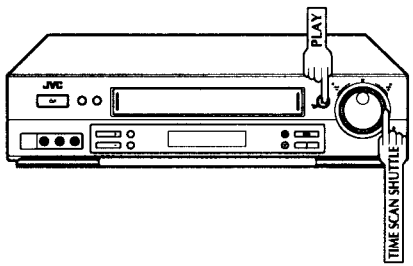
3 STOP PLAYBACK

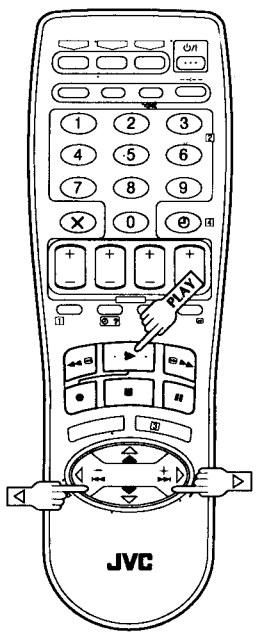
Press **STOP** at any time to stop playback.

NOTE:

*Pressing **PLAY**, **REW**, **FF** or **PAUSE** also stops Repeat Playback.*

TimeScan
(HR-DD858E/EH only)





Your recorder is equipped with the TimeScan function. TimeScan allows noise free pictures to be displayed on your TV screen in the forward and reverse search modes. Audio will be played back at normal speed during the TimeScan modes (☞ pg. 19). TimeScan allows you to view a programme in search mode while listening to the audio.

NOTES:

- *"TIME SCAN AUDIO" must be set to "ON", or the sound will not be heard in TimeScan mode. (☞ pg. 19)*
- *The audio will not synchronize with the video in TimeScan modes.*
- *In Pause mode 3 seconds (approx.) of audio will be played back repeatedly. (☞ pg. 12)*
- *In TimeScan search modes some of the audio information will not be played so that the audio can keep up with the video.*
- *Slow motion is not possible with TimeScan.*

Audio signal during TimeScan

Playback tape ① ② ③ ④ ⑤

Sound of ①, ③ and ⑤ is heard.
Sound of ② and ④ is not heard.
Output audio signal is normal (monaural) sound.

Variable-Speed Search (HR-DD858E/EH only)

1 ACTIVATE VARIABLE-SPEED SEARCH

During playback or still, turn the recorder's **TIME SCAN SHUTTLE** ring. It remains at that position even after you release it. Each time it passes a click position, the playback speed changes.
(Refer to the chart on pg 19 for playback speeds).

OR

During playback, press ◁ or ▷.

- The more times you press, the faster the playback picture moves.
- To decrease speed, press the button for the opposite direction.
(Refer to the chart on pg 19 for playback speeds).

To resume normal playback, press **PLAY**.

TimeScan

Names of special-effects playback	Reverse				Forward		
	Search	Play	Slow-Motion	*Still	Slow-Motion	Play	Search
Speed SP	-9x, -7x, -5x, -3x	-1x	-1/6x, -1/18x	0	1/18x, 1/6x	1x	2x, 3x, 5x, 7x, 9x
Speed LP	-7x, -3x		-1/6x, -1/18x	0	1/18x, 1/6x	1x	2x, 5x, 9x
Audio output	Audio is output.		Audio is not output.	Audio is output.	Audio is not output.		Audio is output.

* Still mode cannot be engaged using the remote control's ◁ or ▷ button.

- The speed is shown during TimeScan in the upper right corner of the TV screen for approx. 5 seconds. (The display may be distorted.)
- To resume normal playback, press **PLAY**.
- When using the recorder's **TIME SCAN SHUTTLE** ring, the playback speed may not change in the correct step if it is turned too fast.
- Picture and audio may become distorted when the recording speed changes. When this happens, resume normal playback once, and then try using TimeScan again.
- The picture may be noisy or there may be a loss of colour when you change the playback speed. (More noise will appear with LP recordings.)
- Noise may appear or the upper part of the picture may be distorted during still, frame-by-frame playback, 2x search of LP recordings, or depending on the tape being used.
- Picture may appear distorted in comparison to normal playback.
- In TimeScan mode there will be a time lag between the video and the audio and noise may appear in the audio signal.
- TimeScan sound quality will differ in comparison to normal playback.
- When the playback direction is reversed, it takes approximately 6 seconds until sound is heard.
- Picture will be monochrome with an LP-recorded MESECAM tape during TimeScan.
- TimeScan does not work with NTSC playback.

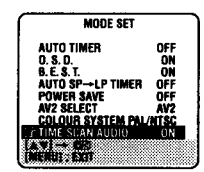
If you don't want to hear TimeScan audio, set "TIME SCAN AUDIO" to "OFF" (See below).

TimeScan Audio

The audio output can be set ON/OFF during TimeScan. Select ON/OFF as required.

* The default setting is "ON".

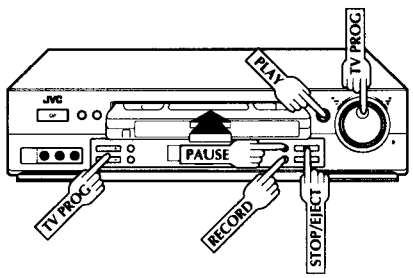
1. Press **MENU** to access the Main Menu screen.
2. Move the highlight bar (pointer) to "MODE SET" by pressing △▽, then press **OK** or ▷.
3. Move the highlight bar (pointer) to "TIME SCAN AUDIO" by pressing △▽, then press **OK** or ▷ to select "ON" or "OFF".
4. Press **MENU** to return to the normal screen.

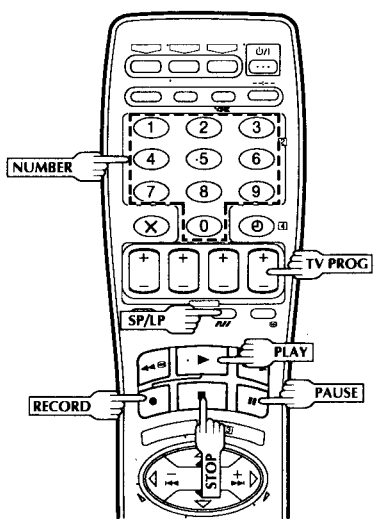


"POWER SAVE" appears only with the HR-DD858E.

Basic Recording

Turn on the TV and select the VIDEO channel (or AV mode).





Recording Resume Function

If there is a power outage during recording (or Instant Timer Recording or timer recording), the recording will resume automatically when power is restored to the recorder unless the recorder's memory backup has expired.

TV signals being received by the recorder's built-in tuner can be recorded onto a video tape. You can "capture" a TV programme using your video recorder.

1 LOAD A CASSETTE

Insert a cassette with the record safety tab intact.

- The counter is reset to 0:00:00 and the recorder power comes on automatically.

2 CHOOSE A PROGRAMME

Press **TV PROG +/–** or the **NUMBER** keys to select the channel you wish to record.

- The **TV PROG** dial can also be used to select a channel.

3 SET TAPE SPEED

Press **SP/LP (///)**. Check the SP/LP indicator on the recorder display panel to confirm the selected tape speed.

- The HR-J758E/EH owners can use the **SP/LP** button on the recorder's front panel as well.

4 START RECORDING

Press and hold **RECORD** and press **PLAY** on the remote control, or press **RECORD** on the recorder.

B.E.S.T. takes place at the beginning of both the first SP and the first LP recording after inserting the cassette (☞ pg. 24).

5 PAUSE/RESUME RECORDING

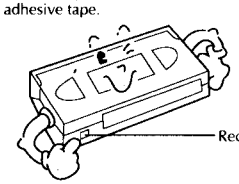
Press **PAUSE**. Press **PLAY** to resume recording.

6 STOP RECORDING

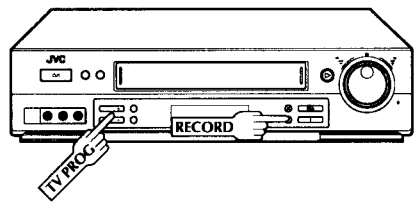
Press **STOP** on the remote control or **STOP/EJECT** on the recorder. Then press **STOP/EJECT** to remove the cassette.

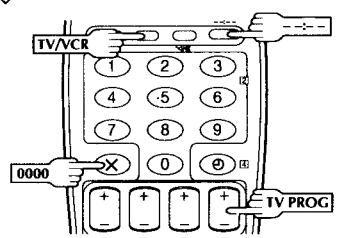
Accidental erasure prevention

- To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.



Recording Features





Instant Timer Recording (ITR)

This easy method lets you record for from 30 minutes to 6 hours (selectable in 30-min. increments), and shuts the recorder off after recording is finished.

1 START RECORDING

Press **RECORD** on the recorder.

2 ENGAGE ITR MODE

Press **RECORD** again. "◯" blinks and 0:30 appears on the front display panel.

3 SET RECORDING DURATION

If you want to record for more than 30 minutes, press **RECORD** to extend the time. Each press extends recording time by 30 minutes.

NOTE:

*You can only perform ITR using the **RECORD** button on the recorder's front panel.*

Record One Programme While Watching Another

*If your recorder is connected to the TV via AV connection, ... press **TV/VCR**.* The recorder's VCR indicator and the TV broadcast being recorded disappear.

1 SELECT CHANNEL TO WATCH

Once recording is in progress, all you need to do is to set the channel controls on the TV for the station you wish to view.

- The programme selected with the TV's channel controls appears on the TV screen while the one selected with the recorder's **TV PROG** buttons is recorded on the tape.
- If a decoder is connected to the recorder (☞ pg. 43), you can select a scrambled channel as well with the TV channel controls.

Elapsed Recording Time Indication

You can check the exact time of a recording.

1 SET COUNTER DISPLAY

Press – –:– – until a counter reading appears on the dispay panel.

- The HR-J758E/EH owners can use the **DISPLAY** button on the recorder's front panel as well.

2 RESET COUNTER

Press **0000** before starting recording or playback.

- The counter is reset to "0:00:00" and shows the exact elapsed time as the tape runs.

Tape Remaining Time

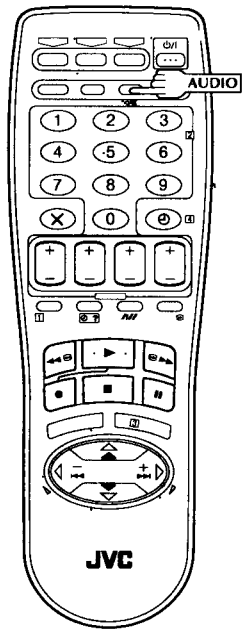
1 DISPLAY REMAINING TIME

Press – –:– – until the time remaining on the tape appears.

- The display panel shows the tape remaining time with "◺" displayed.
- By pressing the – –:– – button, you can change the display to show the counter reading, channel position*, clock time or tape remaining time.
  ** channel position is not displayed during playback.*
- The HR-J758E/EH owners can use the **DISPLAY** button on the recorder's front panel as well.

NOTE:

Depending on the type of tape used, there may be times when the tape remaining time reading may not appear right away, or is not correct. "– –:– –" may sometimes appear, or the display may blink on occasion.



Receiving Stereo And Bilingual Programmes

Your recorder is equipped with a Sound-Multiplex decoder (A2) and, if you own the HR-J758EH or HR-DD858EH, a Digital stereo sound decoder (NICAM) as well, making reception of stereo and bilingual broadcasts possible.

When the channel is changed, the type of broadcast being received will be displayed on the TV screen for a few seconds.

Type of Broadcast Being Received	On-screen Display
A2 Stereo	ST
A2 Bilingual	BIL
Regular Monaural	(none)
*NICAM Stereo	ST NICAM
*NICAM Bilingual	BIL NICAM
*NICAM Monaural	NICAM

*Available with HR-J758EH or HR-DD858EH only.

- To listen to a stereo programme, press **AUDIO** until "🔊" and "🔊" appear on the front display panel or "HIFI L 🔊 R" appears on the screen.
- To listen to a bilingual programme, press **AUDIO** until "🔊" or "🔊" appears on the front display panel, or "HIFI L 🔊" or "HIFI R" appears on the screen (as required).
- To listen to the Standard (regular monaural) audio while receiving a NICAM broadcast, press **AUDIO** until "NORM" appears on the front display panel or on the screen. (HR-J758EH or HR-DD858EH only)

NOTE:

"O.S.D." must be set to "ON" or the on-screen displays will not appear (☞ pg. 8).

To Record Stereo And Bilingual Programmes (A2)

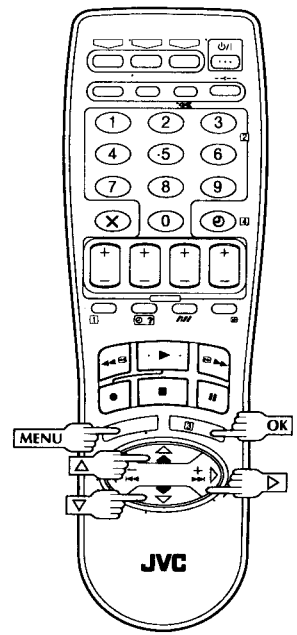
- Stereo programmes are automatically recorded in stereo on the Hi-Fi audio track (with the normal audio track recording mixed L and R channel sound).
- Bilingual programmes are automatically recorded in bilingual on the Hi-Fi audio track. The main soundtrack will be recorded on the normal audio track.

To Record NICAM Stereo And Bilingual Programmes (HR-J758EH or HR-DD858EH only)

The NICAM audio programme will be recorded on the Hi-Fi audio track, and the Standard audio programme on the normal audio track.

NOTES:

- *If the quality of stereo sound being received is poor, the broadcast will be received in monaural with better quality.*
- *Before playing back a programme recorded in stereo, or a bilingual programme, refer to "Soundtrack Selection" (☞ pg. 16).*



Hi-Fi Audio Recording Level Control (HR-DD858E/EH only)

Your recorder allows manual adjustment of the Hi-Fi audio recording level. Normally the preset audio recording level is satisfactory, but if the sound you are going to record is too loud or too low, adjust the audio recording level while referring to the recorder's audio level meters.

1 ACCESS MAIN MENU SCREEN

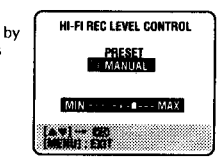
Press **MENU**.

2 ACCESS HI-FI REC LEVEL CONTROL SCREEN

Press △▽ to move the highlight bar (pointer) to "REC LEVEL CTL", then press **OK** or ▷.

3 SELECT MODE

Move the highlight bar (pointer) to "MANUAL" by pressing △▽, then press **OK** or ▷.



4 ADJUST AUDIO RECORDING LEVEL

Press △ or ▽.

- Press △ or ▽ briefly 5 times to move the on-screen's audio levels by one division on the scale. To move the audio levels faster, keep △ or ▽ pressed.
- Adjust the recording level while watching the recorder's audio level meters. Set the level so that maximum volume causes the meters to vary between 0dB to 4dB.

5 RETURN TO NORMAL SCREEN

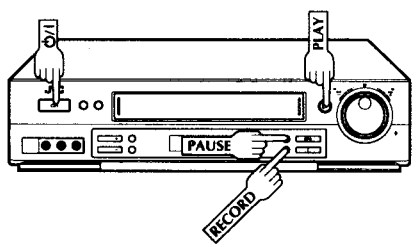
Press **MENU**.

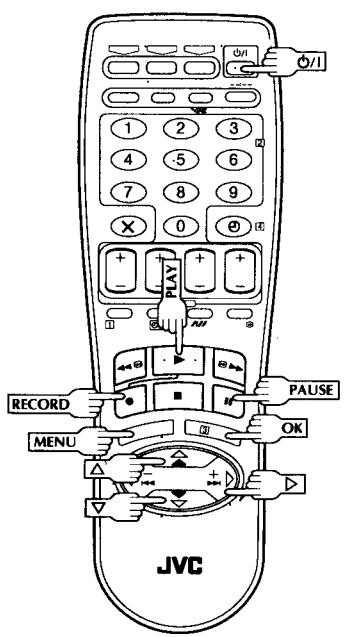
NOTE:

Noise will increase if the recording level is too low, while distortion will increase if the level is too high.

B.E.S.T. Picture System

Turn on the TV and select the VIDEO channel (or AV mode).





The B.E.S.T. (Biconditional Equalised Signal Tracking) system checks the condition of the tape in use during recording and playback, and compensates to provide the highest-possible recording and playback pictures. The default setting for both recording and playback is "ON".

Preparation

1 TURN ON THE RECORDER

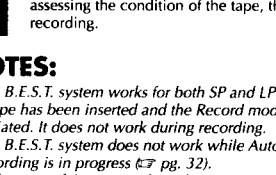
Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

Press **MENU**.

3 ACCESS MODE SET SCREEN

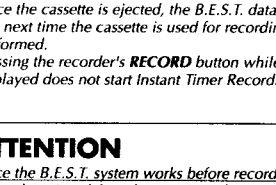
Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.



- "REC LEVEL CTL" appears only with the HR-DD858E and HR-DD858EH.

4 SELECT B.E.S.T. MODE

Press △▽ to move the highlight bar (pointer) to "B.E.S.T.", then press **OK** or ▷ to set to "ON" or "OFF".



- "POWER SAVE" appears only with the HR-J758E and HR-DD858E.
- "TIME SCAN AUDIO" appears only with the HR-DD858E and HR-DD858EH.

5 RETURN TO NORMAL SCREEN

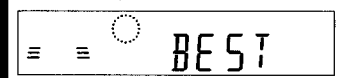
Press **MENU**.

Recording

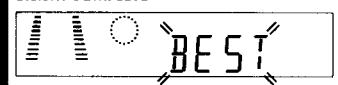
1 START RECORDING

Press and hold **RECORD** and press **PLAY** on the remote, or press **RECORD** on the recorder.

DURING B.E.S.T.



B.E.S.T. COMPLETE



- The recorder spends approximately 7 seconds assessing the condition of the tape, then begins recording.

NOTES:

- *The B.E.S.T. system works for both SP and LP modes only after a tape has been inserted and the Record mode is first initiated. It does not work during recording.*
- *The B.E.S.T. system does not work while Auto Satellite Prog recording is in progress (☞ pg. 32).*
- *In the case of timer recording, the B.E.S.T. system works before recording is initiated.*
- *Once the cassette is ejected, the B.E.S.T. data is cancelled. The next time the cassette is used for recording, B.E.S.T. is re-performed.*
- *Pressing the recorder's **RECORD** button while "BEST" is displayed does not start Instant Timer Recording (☞ pg. 21).*

ATTENTION

*Since the B.E.S.T. system works before recording actually starts, there is a delay of approximately 7 seconds after **RECORD** and **PLAY** on the remote are pressed, or **RECORD** on the recorder is pressed. To make sure you record the desired scene or programme in its entirety, first perform the following steps:*

*1) Press and hold **PAUSE** and press **RECORD** to engage the RECORD PAUSE mode.*
- *The recorder then automatically checks the condition of the tape and, after approximately 7 seconds, re-enters RECORD PAUSE.*

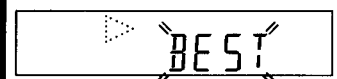
*2) Press **PLAY** to start recording.*
- *If you want to bypass the B.E.S.T. system and begin recording immediately, set "B.E.S.T." to "OFF" in step 4 on page 24.*

Playback

The recorder assesses the quality of the tape once you initiate playback.

1 START PLAYBACK

Press **PLAY**.



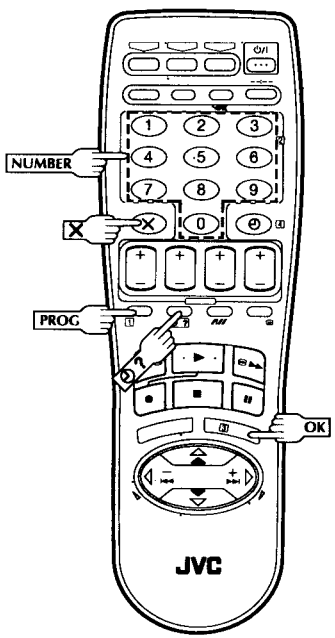
- The recorder adjusts the playback picture quality based on the quality of the tape in use.
- B.E.S.T. is active during Auto Tracking. "BEST" appears blinking on the recorder's display panel.

NOTES:

- *When watching a tape recorded with "B.E.S.T." set to "ON", it is recommended that you leave B.E.S.T. on during playback as well.*
- *When watching a rental tape or one recorded on another video recorder, or when using this recorder as the player for editing, set B.E.S.T. to your preference by performing steps **1** through **5** on page 24.*
- *"BEST" only appears at the beginning of automatic tracking. Even though it doesn't appear after that, the B.E.S.T. function is operative.*

SHOWVIEW Timer Programming

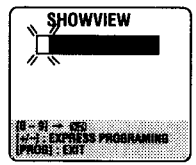
Before performing SHOWVIEW Timer Programming:
- Make sure that the recorder's built-in clock is set properly.
- Insert a cassette with the safety tab in place. The recorder will come on automatically.
- Turn on the TV and select the VIDEO channel (or AV mode).



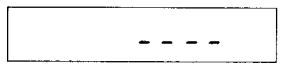
With SHOWVIEW, timer programming is greatly simplified because each TV programme has a corresponding code number which your recorder is able to recognize.

1 ACCESS SHOWVIEW SCREEN

Press **PROG**.



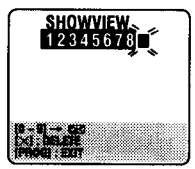
The front display panel looks like this:



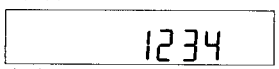
2 ENTER SHOWVIEW NUMBER

Press the **NUMBER** keys to enter the SHOWVIEW number of a programme you wish to record.

- If you make a mistake, press X and input the correct number.



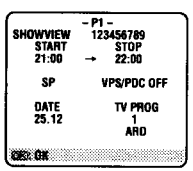
The SHOWVIEW number you enter appears on the front display panel:



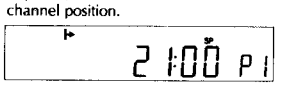
The display panel can show only a 4-digit number.

3 ACCESS SHOWVIEW PROGRAM SCREEN

Press **OK**, and the SHOWVIEW Program screen appears (if you're just starting out, "P1" appears).

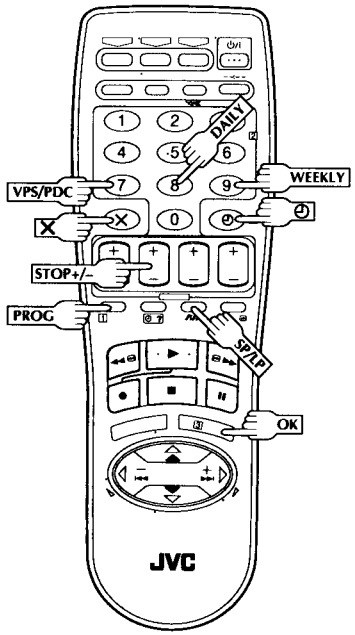


The display panel shows the programme start time. Pressing ◴ **?** changes the display to the programme stop time, then the date and channel position.



IMPORTANT
Make sure the channel position number you wish to record is displayed; if not, see "SHOWVIEW Setup" on page 53 and set the Guide Program number for that SHOWVIEW number correctly.

- If the number you entered is invalid, "ERROR" appears on the screen and "Err" appears on the display panel. Press X and input a valid SHOWVIEW number.
- If the "GUIDE PROG SET" screen appears, see "ATTENTION – Regarding Guide Program Number Set" on page 27.

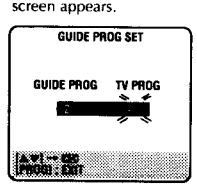


Satellite Tuner Users
To timer-record a satellite broadcast using SHOWVIEW:
1. Set "AV2 SELECT" to "AV2" (☞ pg. 37).
2. Perform steps **1 – 7**.
3. Set the satellite tuner to the appropriate channel before the selected programme begins.
4. Leave the satellite tuner's power on.

ATTENTION

Regarding Guide Program Number Set

"GUIDE PROG SET" appears after performing step **3** if the Guide Program number for the SHOWVIEW number you entered has not been set.
- Press the **NUMBER** keys or △▽ to input the channel position number on which your recorder receives that station, then press **OK** or ▷. The SHOWVIEW program screen appears.



(Ex.) To timer-record a ZDF programme with SHOWVIEW.
* If your recorder receives ZDF on the channel position 2, press **OK** or ▷ after entering "2".

4 SET TAPE SPEED

Press **SP/LP** (**///**) to set the tape speed.

5 SET VPS/PDC MODE

Press **VPS/PDC** to select "ON" or "OFF".
If "VPS/PDC ON" is displayed on the screen or "VPS/PDC" is lit on the display panel, VPS/PDC is set to ON.
If "VPS/PDC OFF" is displayed on the screen or "VPS/PDC" is not lit on the display panel, VPS/PDC is set to OFF.
☞ "VPS/PDC Recording" on page 29.

6 RETURN TO NORMAL SCREEN

Press **PROG** or **OK**. "PROGRAM COMPLETED" appears on the screen for about 5 seconds, then normal screen appears.

- Repeat steps **1 – 6** for each additional programme.

7 ENGAGE RECORDER'S TIMER MODE

Press ◴ (**TIMER**). The recorder turns off automatically and ◴ appears on the display panel.

- To disengage the timer, press ◴ (**TIMER**) again.

NOTES:

- *To Change The Stop Time . . .*
  *. . . press **STOP +/–** after pressing **OK** in step **3**. You can compensate for anticipated programme schedule delays this way.*
- *To Timer-Record Weekly Or Daily Serials . . .*
  *. . . after pressing **OK** in step **3**, press **WEEKLY** (**NUMBER** key "9") for weekly serials or **DAILY** (**NUMBER** key "8") for daily serials (Monday – Friday). Either "WEEKLY" or "DAILY" appears on the screen. Pressing the button again makes the corresponding indication disappear.*
- *You can programme this recorder to timer-record as many as 8 programmes. If you try to programme the recorder to record a ninth, "PROGRAM FULL" appears on screen and "FULL" appears on the front display panel. To record the extra programme, you must first cancel any unnecessary programmes (☞ pg. 30).*
- *It is not possible to timer-record a TV programme with a SHOWVIEW number which starts with "0".*

Timer Warning

If you have programmed your recorder to timer-record a programme or a series of programmes, a warning appears on screen to tell you that the recording is to start in 5 minutes.

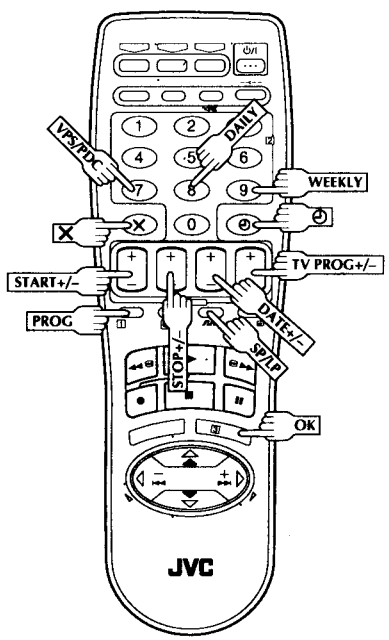
NOTES:

- *The warning only appears if you're not in the Timer mode at that time.*
- *If this recorder is being used as the player for tape dubbing, the warning screen is recorded on the tape in the other video recorder.*

The warning blinks for the entire 5 minutes leading up to the start of timer recording. To clear the display, press X.

Express Timer Programming

Before performing Express Timer Programming:
- Make sure that the recorder's built-in clock is set properly.
- Insert a cassette with the safety tab in place. The recorder will come on automatically.
- Turn on the TV and select the VIDEO channel (or AV mode).



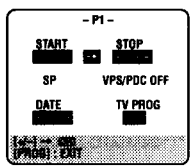
If you don't know the SHOWVIEW number for the programme you wish to record, use the following procedure to set your recorder to timer-record the programme.

1 ACCESS SHOWVIEW SCREEN

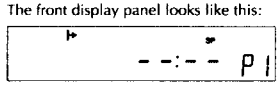
Press **PROG**.

2 ACCESS PROGRAMME SCREEN

Press **START +/–**. (If you're just starting out, "P1" appears.)



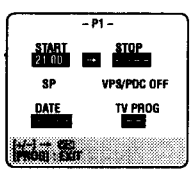
The front display panel looks like this:



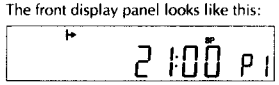
3 ENTER PROGRAMME START TIME

Press **START +/–** to enter the time you want recording to start.

- Press and hold **START +/–** to move in 30-minute increments, or press and release repeatedly to move 1 minute at a time.



The front display panel looks like this:



4 ENTER PROGRAMME STOP TIME

Press **STOP +/–** to enter the time you want recording to stop.

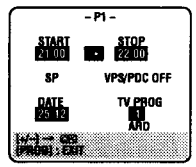
- Press and hold **STOP +/–** to move in 30-minute increments, or press and release repeatedly to move 1 minute at a time.

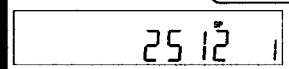
5 ENTER PROGRAMME DATE

Press **DATE +/–**. (The current date appears on screen. The date you enter appears in its place.)

6 ENTER CHANNEL POSITION

Press **TV PROG +/–**.





7 SET TAPE SPEED

Press **SP/LP (▮▮▮)** to set the tape speed.

8 SET VPS/PDC MODE

Press **VPS/PDC** to select "ON" or "OFF".
If "VPS/PDC ON" is displayed on the screen or "VPS/PDC" is lit on the display panel, VPS/PDC is set to ON.
If "VPS/PDC OFF" is displayed on the screen or "VPS/PDC" is not lit on the display panel, VPS/PDC is set to OFF.
☞ "VPS/PDC Recording" in the right column.

9 RETURN TO NORMAL SCREEN

After confirming all information is correct, press **PROG** or **OK**. "PROGRAM COMPLETED" appears on the screen for about 5 seconds, then normal screen appears.

- Repeat steps **1** – **9** for each additional programme.

10 ENGAGE RECORDER'S TIMER MODE

Press ⏲ **(TIMER)**. The recorder turns off automatically and ⏲ appears on the display panel.

- To disengage the timer, press ⏲ **(TIMER)** again.

To Timer-Record Weekly Or Daily Serials . . .
. . . anytime during steps **2** through **9**, press **WEEKLY (NUMBER** key **"9")** for weekly serials or **DAILY (NUMBER** key "8") for daily serials (Monday – Friday). Either "WEEKLY" or "DAILY" appears on the screen. Pressing the button again makes the corresponding indication disappear.

NOTE:

You can programme this recorder to timer-record as many as 8 programmes. If you try to programme the recorder to record a ninth, "PROGRAM FULL" appears on screen and "FULL" appears on the front display panel. To record the extra programme, you must first cancel any unnecessary programmes (☞ pg. 30).

Satellite Tuner Users
To timer-record a satellite broadcast using Express Timer Programming:
1. Set "AV2 SELECT" to "AV2" (☞ pg. 37).
2. Perform steps **1** – **10**. Enter "L-2" for the channel position in step **6**.
3. Set the satellite tuner to the appropriate channel before the selected programme begins.
4. Leave the satellite tuner's power on.

VPS/PDC Recording

Now available from some TV stations, PDC (Programme Delivery Control) and VPS (Video Programme System) are service designed to assure safe, accurate timer recording. With this system, special code signals are transmitted together with the audio/video signals. These code signals control your video recorder and have precedence over the advertised times you may have preset into the timer. This means that your recorder will start and stop recording when the preset TV programmes actually start and end — even if the broadcast time of a preset TV programme is changed.

NOTES:

- *When you use Express Timer Programming, set the start time (VPS or PDC time) exactly as advertised in the TV listing. A different time than advertised will result in no recording.*
- *VPS/PDC recording is also possible when a satellite tuner or a cable system is connected to AV2 IN/DECODER on your recorder.*
- *VPS/PDC recording is also possible via the AV1 IN/OUT connector.*

How to check if the station being received transmits a VPS/PDC signal
1. Press – –:– – until the channel position appears on the display panel.
2. Hold down **START+** for about 5 seconds.
   - "VPS/PDC" appears blinking on the display panel.
   If a VPS/PDC signal is detected from the station, "VPS/PDC" will stop blinking.
   If no VPS/PDC signal is detected from the station, "VPS/PDC" will blink at a slower rate.
3. Press – –:– – or **START+** again to return to normal display.

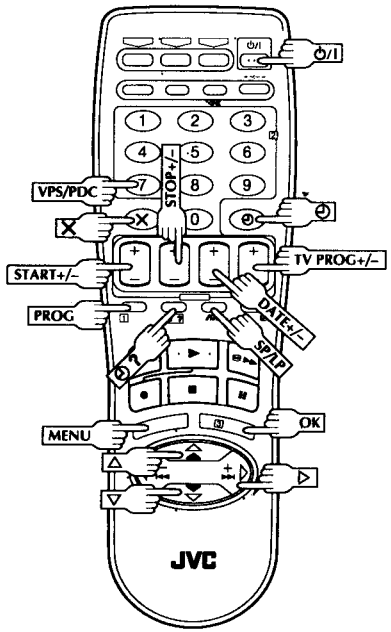
Timer Warning

If you have programmed your recorder to timer-record a programme or a series of programmes, a warning appears on screen to tell you that the recording is to start in 5 minutes.

NOTES:

- *The warning only appears if you're not in the Timer mode at that time.*
- *If this recorder is being used as the player for tape dubbing, the warning screen is recorded on the tape in the other video recorder.*

The warning blinks for the entire 5 minutes leading up to the start of timer recording. To clear the display, press **X**.



Check, Cancel And Replace Programmes

1 DISENGAGE TIMER MODE

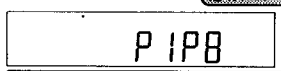
Press ⏲, then press ⏻/I.

2 ACCESS PROGRAM CHECK SCREEN/DISPLAY

Press ⏲ **?**.

PR	START	STOP	CH	DATE
1	8:00	10:00	3	24.12
2	10:00	10:45	2	25.12
3	11:30	13:00	1	25.12
4				
5				
6				
7				
8				

⏲ ?: NEXT



3 ACCESS PROGRAM SCREEN/DISPLAY

Press ⏲ **?** again to check more information. Each time you press ⏲ **?**, the next programme's information appears.

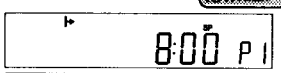
– P1 –

START 8:00 — STOP 10:00

SP VPS/PDC OFF

DATE 24.12 TV PROG 8 WOR

⏲ ?: NEXT



- The display panel shows the programme start time. Pressing **OK** changes the display to the programme stop time, then the date and the channel position.

To cancel or replace a programme...

4 CANCEL OR REPLACE A PROGRAMME

Press ✕ to cancel a programme. To replace a programme, press the appropriate button: **START+/–, STOP+/–, DATE+/–, TV PROG+/–, VPS/PDC, SP/LP** (▮▮▮).

5 RETURN TO NORMAL SCREEN/DISPLAY

Press ⏲ **?** as many times as necessary. If there are still some programmes remaining, go on to step **6**.

6 RETURN TO TIMER MODE

Press ⏲.

NOTE:

You can also check the programmes on the display panel even if the recorder's power is off (unless the recorder is in the Power Save mode ☞ pg. 9) or the recorder is in the Timer mode; however, it is not possible to cancel or replace the programmes.

Auto SP→LP Timer

If, when timer-recording in SP mode, there is not enough tape to record the entire programme, the recorder automatically switches to LP mode to allow complete recording.

For Example . . .

Recording a programme of 210 minutes in length onto a 180-minute tape

Approximately 150 minutes	Approximately 60 minutes
SP mode	LP mode

Total 210 minutes

Make sure you set "AUTO SP→LP TIMER" to "ON" at the Mode Set screen before the timer-recording starts.

1 ACCESS MAIN MENU SCREEN

Press **MENU**.

2 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.

3 SELECT MODE

Press △▽ to move the highlight bar (pointer) to "AUTO SP→LP TIMER", then press **OK** or ▷ to select "ON".

MODE SET

AUTO TIMER	OFF
O. S. D.	ON
B. E. S. T.	ON
AUTO SP→LP TIMER	ON
POWER SAVE	OFF
AV2 SELECT	AV2
COLOUR SYSTEM PAL/NTSC	
TIME SCAN AUDIO	ON

▲▼/→ SEL
MENU : EXIT

- "POWER SAVE" appears only with the HR-J758E and HR-DD858E.
- "TIME SCAN AUDIO" appears only with the HR-DD858E and HR-DD858EH.

4 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTES:

- *If you have programmed the recorder to timer-record 2 or more programmes, the second programme and those thereafter may not fit on the tape if you set "AUTO SP→LP TIMER" to "ON". In this case, make sure the mode is not engaged, then set the tape speed manually during timer programming.*
- *In order to ensure that the recording fits on the tape, this feature may leave a slight non-recorded section at the end of the tape.*
- *There may be some noise and sound disturbance at the point on the tape where the recorder switches from SP to LP mode.*
- *The Auto SP→LP Timer feature is not available during ITR (Instant Timer Recording), and the feature will not work properly with any tapes longer than E-180 or with some tapes of shorter lengths.*
- *If you perform timer recording with both VPS/PDC and the Auto SP→LP Timer activated, and the programme goes beyond its originally scheduled length, there may be times when the programme cannot be recorded in its entirety.*

Auto Timer

When the Auto Timer is set to ON the timer is automatically engaged when the recorder power is turned off and automatically disengaged when the recorder is powered back on.

1 ACCESS MAIN MENU SCREEN

Press **MENU**.

2 ACCESS MODE SET SCREEN

Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷.

MAIN MENU

MODE SET
AUTO CH SET
MANUAL CH SET
INITIAL SET
REC LEVEL CTL

▲▼/→ SEL
MENU : EXIT

- "REC LEVEL CTL" appears only with the HR-DD858E and HR-DD858EH.

3 SELECT MODE

Press **OK** or ▷ to select either "ON" or "OFF".

MODE SET

AUTO TIMER	OFF
O. S. D.	ON
B. E. S. T.	ON
AUTO SP→LP TIMER	OFF
POWER SAVE	OFF
AV2 SELECT	AV2
COLOUR SYSTEM PAL/NTSC	
TIME SCAN AUDIO	ON

▲▼/→ SEL
MENU : EXIT

- "POWER SAVE" appears only with the HR-J758E and HR-DD858E.
- "TIME SCAN AUDIO" appears only with the HR-DD858E and HR-DD858EH.

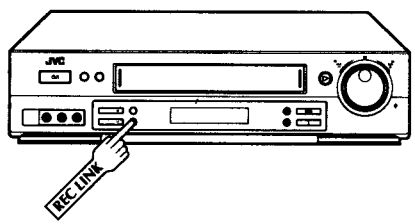
4 RETURN TO NORMAL SCREEN

Press **MENU**.

NOTE:

*For safety, when Auto timer is set to "OFF", all other recorder functions are disabled while the Timer mode is engaged. To disengage the timer, press ⏲ (**TIMER**).*

Automatic Satellite Programme Recording



This facility allows you record automatically a satellite programme which is timer-programmed on your external satellite tuner. Connect a satellite tuner to the recorder's AV2 IN/DECODER connector and programme the timer on the satellite tuner; the recorder starts recording when the signals input from the satellite tuner to the AV2 IN/DECODER connector, and when there is no input signals the recorder stops recording and the power shuts off.

Before performing the following steps:
- Make sure the satellite tuner is connected to the recorder's AV2 IN/DECODER connector. (☞ pg. 42)
- Programme the timer on the satellite tuner.
- Insert a cassette with the safety tab in place.

1 SELECT AV2 SELECT MODE

Set "AV2 SELECT" to "AV2" (☞ pg. 37).

2 SET TAPE SPEED

Press **SP/LP** (**///**) to set the tape speed.

3 ENGAGE AUTO SATELLITE PROG REC MODE

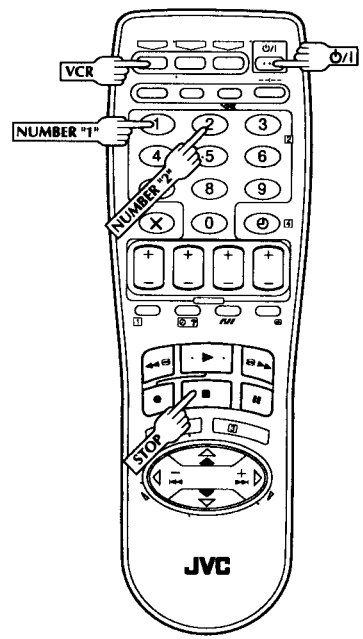
Press and hold **REC LINK** for about 2 seconds. The button lights up and the recorder turns off automatically.

- To disengage the Auto Satellite Prog Rec mode, press **REC LINK**. The button's light goes off.
- If the recorder's power is off, it is not possible to engage the Auto Satellite Prog Rec mode.

ATTENTION
- Be sure not to turn on the satellite tuner before the programme is executed; otherwise, the recorder will start recording when the satellite tuner's power is turned on.
- If you have connected another appliance other than a satellite tuner to the AV2 IN/DECODER connector, be sure not to engage the Auto Satellite Prog Rec mode; otherwise, the recorder will start recording when the connected appliance's power is turned on.
- Auto Satellite Prog recording and timer-recording cannot be done at the same time.

NOTES:
- *Auto Satellite Prog recording is not possible with the AV1 IN/OUT connector.*
- *For timer programming of the satellite tuner, refer to the instruction manual of the satellite tuner.*
- *Auto Satellite Prog recording is not possible if your satellite tuner does not have a timer.*
- *The button's light blinks while Auto Satellite Prog recording is in progress.*
- *Pressing the recorder's ⏻/I button while Auto Satellite Prog recording is in progress turns off the recorder's power and disengage the Auto Satellite Prog Rec mode.*
- *If there are more than one satellite programme you wish to record with Auto Satellite Prog Recording, it is not possible to set the different tape speed per each; the tape speed selected in step **2** will be applicable to all the programmes for Auto Satellite Prog recording.*
- *The B.E.S.T. system (☞ pg. 24) does not work while Auto Satellite Prog recording is in progress.*
- *Just Clock (☞ pg. 54) does not work when the Auto Satellite Prog Rec mode is engaged.*
- *Depending on the type of satellite tuner, the recorder may not record a slight portion of the beginning of the programme or may record slightly longer than the actual length of the programme.*
- *If you engage the Auto Satellite Prog Recording mode when the satellite tuner's power is on, the recorder will not start Auto Satellite Prog recording even though the button's light blinks. When the satellite tuner shuts off once and is turned back on again, the recorder starts recording.*
- *When the Auto Satellite Prog Rec mode is engaged or the recorder's power is turned off after Auto Satellite Prog recording is finished, the recorder will not enter the Timer mode even though "AUTO TIMER" is set to "ON".*
- *After Auto Satellite Programme recording, the number of recorded programmes will not be displayed on the front display panel for the Instant ReView function (☞ pg. 15).*
- *You can also record a programme from your cable system in the same way if the system has a timer.*

Remote Control Functions



Remote A/B Code Switching

The remote control is capable of controlling two JVC video recorders independently; one set to respond to the remote control's A code control signals and another set to respond to B code control signals. The remote control is preset to send A code signals because your video recorder is initially set to respond to A code signals. You can easily modify your video recorder to respond to B code signals.

1 REMOVE POWER SUPPLY

Unplug the mains power cord from the mains outlet.

2 SET REMOTE CONTROL CODE

While holding down **VCR** on the remote control, press the **NUMBER** key "2" and then press **STOP**.

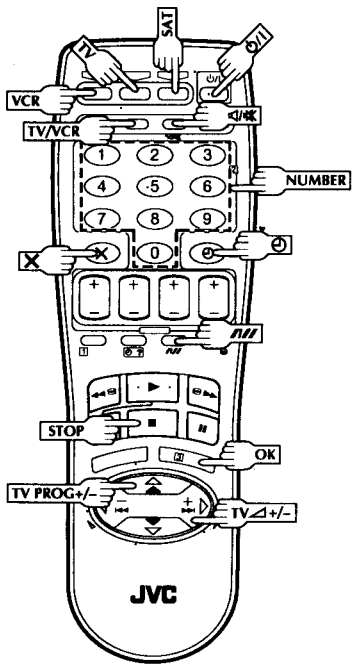
3 RE-SUPPLY POWER

Plug the mains power cord back into the mains outlet.

4 TURN THE RECORDER ON

Press ⏻/I on the remote control. The recorder will now only respond to B code signals.

NOTES:
- *Some TV sets may malfunction in response to the B code. If this happens, switch back to the A code.*
- *To set the recorder back to respond to A code signals, repeat the same procedure as shown above except pressing **NUMBER** key "1" instead of "2" in step **2**.*



TV Multi-brand Remote Control

Your remote control can operate the basic functions of your TV set. In addition to JVC TVs, other manufacturer's TVs can also be controlled.

Before you start . . .
- Turn on the TV using its remote control.

1 SET TV BRAND CODE

Refer to the chart below. While holding down **TV** on the recorder's remote control, enter your TV's brand code using the **NUMBER** keys, then press **STOP**. Check if the TV's power goes off as it should. If it does, try other operations (☞ step **2**)

- Once you have set the remote control to operate the TV, you don't have to repeat this step until you replace your remote control's battteries.
- JVC or SAMSUNG has more than one code. If the TV does not function with one code, try entering another.

2 OPERATE TV

First, press **TV** to set the remote control to TV mode, then press the corresponding button: ⏻/I, **TV PROG +/–**, **TV/VCR**, **TV** ⊿ +/– (Volume), 🔇/✕ (Muting), **NUMBER** keys.

- For some brands of TV, you must press **OK** after having pressed the **NUMBER** keys.

IMPORTANT

Although the provided remote control unit is compatible with JVC televisions, as well as many other models, it may not work with your TV, or in some instances, may have limited function capability.

ATTENTION

The remote control can operate not only the video recorder but also some of your TV and satellite tuner's functions.
- To operate your video recorder, first press the **VCR** button to set the remote control to the Video mode.
- To operate your TV, first press the **TV** button to set the remote control to the TV mode.
- To operate your satellite tuner, first press the **SAT** button to set the remote control to the Satellite tuner mode.

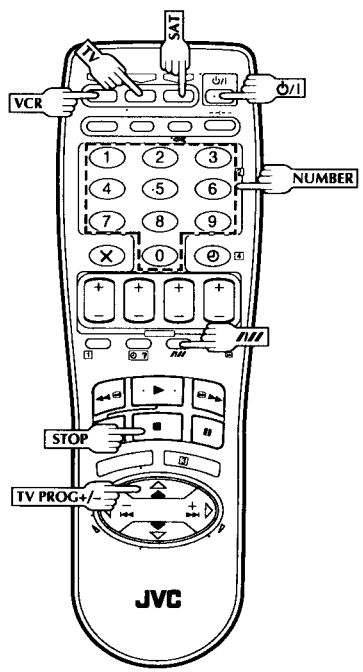
Control Your TV Using Additional Buttons

Use the **NUMBER** keys, and the **/10** button, ✕ button or ⏲ button to select the TV's channel.
- With televisions under Code 01, 02, 03, 04, 05, 06, 07, 09, 10, 13, 14, 22, 23 or 25, the **/10** button corresponds to the 1-digit/2-digit entry switching button (often labelled –/– –) of your TV's remote control.
- With televisions under Code 01, 11 or 12, the ✕ button corresponds to the 10 + button, and the ⏲ button corresponds to the 20 + button of your TV's remote control.

NOTE:

The way these buttons are used is determined by your TV. Use these buttons as instructed for your TV's remote control.

TV BRAND NAME	CODE
JVC	01, 02, 03, 04
BRANDT	05
NORDMENDE	05
SABA	05
TELEAVIA	05
TELEFUNKEN	05
THOMSON	05
FERGUSON	06
PHILIPS	07
SAMSUNG	07, 19, 23, 24, 25
BLAUPUNKT	08
GRUNDIG	08
SONY	09
PANASONIC	10
GRAETZ	11
ITT	11
LUXOR	11
SALORA	11
SELECO	11
MIVAR	12
HITACHI	13
TOSHIBA	14
MITSUBISHI	15
FINLUX	16
NOKIA	17
SHARP	18
FUNAI	20
GOLDSTAR	21
NEC	22



Satellite Tuner Multi-Brand Remote Control

Your remote control can operate the basic functions of your satellite tuner set. In addition to JVC satellite tuners, other manufacturer's satellite tuners can also be controlled.

Before you start . . .
- Turn on the satellite tuner using its remote control.

1 SET SATELLITE RECEIVER BRAND CODE

Refer to the chart below. While holding down **SAT** on the recorder's remote control, enter your satellite tuner's brand code using the **NUMBER** keys, then press **STOP**. Check if the satellite tuner's power goes off as it should. If it does, try other operations (☞ step **2**)

- Once you have set the remote control to operate the satellite tuner, you don't have to repeat this step until you replace your remote control's battteries.
- Some satellite tuner brands have more than one code. If the satellite tuner does not function with one code, try entering another.

2 OPERATE SATELLITE TUNER

First, press **SAT** to set the remote control to satellite tuner mode, then press the corresponding button: ⏻/I, **TV PROG +/–**, **NUMBER** keys.

- For VIDEOWAY or some brands of satellite tuner, you must press **/10** after having pressed the **NUMBER** keys.
- The **NUMBER** buttons may not function with some satellite tuners.

IMPORTANT

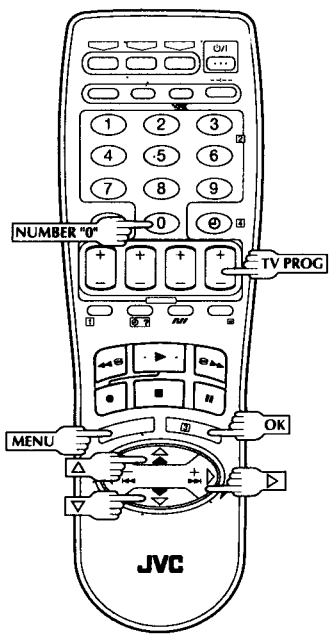
Although the provided remote control unit is compatible with JVC satellite tuners, as well as many other models, it may not work with your satellite tuner, or in some instances, may have limited function capability.

ATTENTION

The remote control can operate not only the video recorder but also some of your TV and satellite tuner's functions.
- To operate your video recorder, first press the **VCR** button to set the remote control to the Video mode.
- To operate your TV, first press the **TV** button to set the remote control to the TV mode.
- To operate your satellite tuner, first press the **SAT** button to set the remote control to the Satellite tuner mode.

SATELLITE TUNER BRAND	CODE
JVC	13, 14
AMSTRAD	01, 02, 03, 04
GRUNDIG	05, 06
HIRSCHMANN	05
SIEMENS	05
WISI	05
KATHREIN	05, 11, 12
PACE	06, 08
PHILIPS	07
FINLUX	09
ITT	09
NOKIA	09
SALORA	09
RFT	10
SKYMASTER	10
MASPRO	11
BT	13
PANASONIC	15
JERROLD	16
VIDEOWAY	17

Edit To Or From Another Video Recorder



You can use your video recorder as the source player or the recording deck.

1 MAKE CONNECTIONS

Connect the player's 21-pin SCART (AV) connector to the recorder's 21-pin SCART (AV) connector as illustrated on page 37.

When Using Your Video Recorder As The Source Player . . .

. . . connect its AV1 IN/OUT connector to the recording deck.

When Using Your Video Recorder As The Recording Deck . . .

. . . connect its AV2 IN/DECODER or AV1 IN/OUT connector to the source player.

2 SET RECORDING DECK'S INPUT MODE

Set to AUX. With this video recorder, press **NUMBER** key "0" and/or **TV PROG** to select depending on the connector being used — "L-1" for the AV1 IN/OUT connector, or "L-2" for the AV2 IN/DECODER connector.

- When using the AV2 IN/DECODER connector, make sure "AV2 SELECT" is set to "AV2" (☞ pg. 37).

3 START SOURCE PLAYER

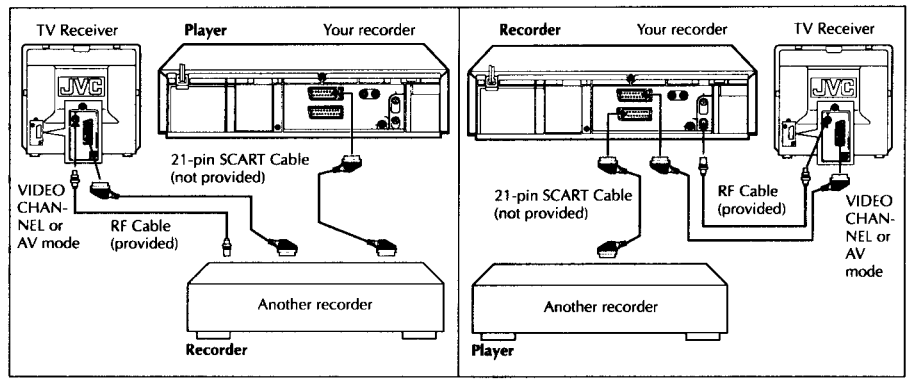
Engage its Play mode.

4 START RECORDING DECK

Engage its Record mode.

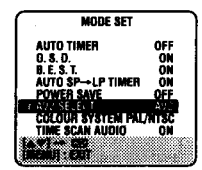
NOTES:

- *All necessary cables can be obtained from your dealer.*
- *When you use this recorder as the player for editing, be sure to set "O.S.D." to "OFF" before starting (☞ pg. 8).*
- *If you use this recorder as the player for editing, be sure to turn off 3R Picture before starting. (☞ pg. 14)*



AV2 SELECT Setting

1 Press **MENU** to access the Main Menu screen.
2 Press △▽ to move the highlight bar (pointer) to "MODE SET", then press **OK** or ▷ .
3 Press △▽ to move the highlight bar (pointer) to "AV2 SELECT".
4 Press **OK** or ▷ to select "AV2" or "DECODER".
a–AV2 : To use this recorder as the recording deck with the player connected to the AV2 IN/DECODER connector.
OR
To record a satellite programme through a satellite tuner connected to the AV2 IN/DECODER connector.
b–DECODER : To use a decoder connected to the AV2 IN/DECODER connector.
5 Press **MENU** to return to normal screen.



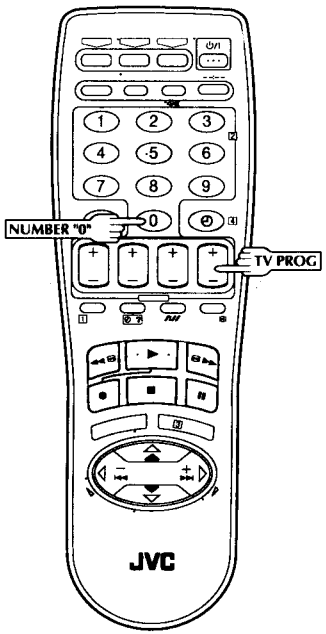
- If you have a decoder, be sure to set "AV2 SELECT" back to "DECODER" after editing.
- If you're not using a decoder, leave "AV2 SELECT" set to "AV2".
- The default setting is "AV2"; if the recorder's memory backup has expired due to a power cut or because the AC was removed from the recorder, "AV2" will be automatically selected when the power is restored to the recorder. If you are using a decoder, be sure to set "AV2 SELECT" back to "DECODER".

NOTES:

On the Mode Set screen ...

- *"POWER SAVE" appears only with the HR-J758E and HR-DD858E.*
- *"TIME SCAN AUDIO" appears only with the HR-DD858E and HR-DD858EH.*

Edit From A Camcorder



You can use a camcorder as the source player and your video recorder as the recorder.

1 MAKE CONNECTIONS

Connect the camcorder's AUDIO/VIDEO OUT connectors to the recorder's front panel AUDIO/VIDEO input connectors.

- When using a monaural camcorder, connect its AUDIO OUT connector to the AUDIO L input connector on your recorder.
- When a Master Edit Control-equipped JVC camcorder is used, the camcorder is capable of controlling the recorder. Refer to the camcorder's instruction manual for operating procedure.

2 SET RECORDER'S INPUT MODE

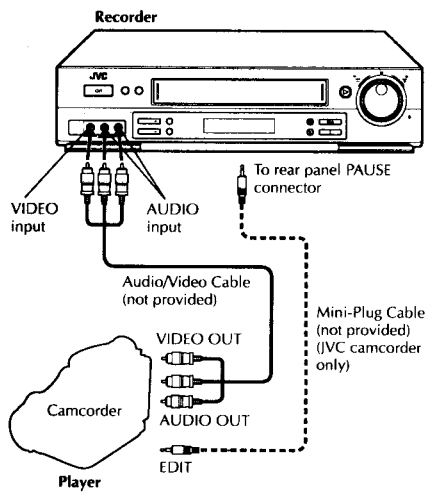
Press **NUMBER** key "0" and/or **TV PROG** so that "F-1" appears in place of a channel position number.

3 START CAMCORDER

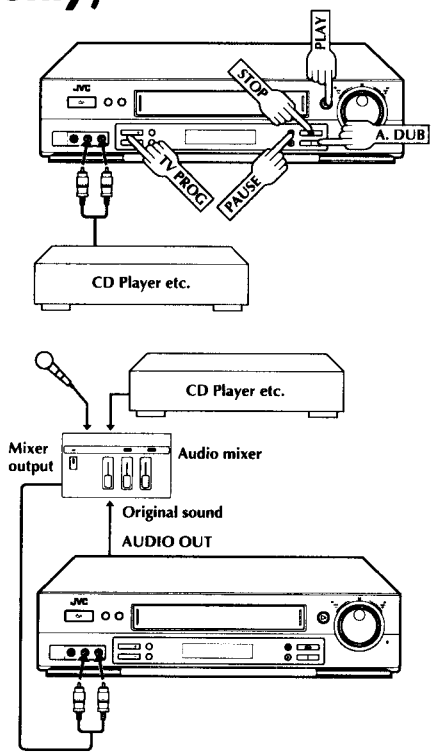
Engage its Play mode.

4 START RECORDER

Engage its Record mode.



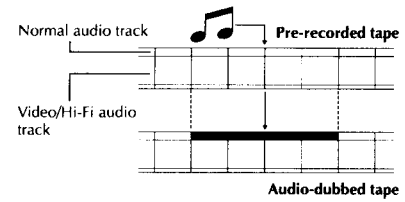
Audio Dubbing (HR-DD858E/EH only)



NOTES:

- *When monitoring the sound during Audio Dubbing, the normal soundtrack is automatically selected. If you wish to hear the mixed sound (Hi-Fi + Normal soundtracks), press **AUDIO** on the remote control to select "▶ + ◀ (L+R)+NORM" (☞ pg. 16).*
- *Audio dubbing stops automatically when the counter reaches "0:00:00", and the recorder enters the Play mode. Check the counter reading before dubbing.*
- *Audio dubbing is also possible using the rear panel AV1 IN/OUT or AV2 IN/DECODER connector. When using these connectors, make sure to select the correct input mode in step 2.*
- *Audio dubbing cannot be performed on a cassette that has had its record safety tab removed.*
- *When playing back an audio-dubbed tape, press **AUDIO** on the remote control to select the soundtrack you wish to hear (☞ pg. 16).*

Audio dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack.



1 MAKE CONNECTIONS

Connect an audio component to the AUDIO L + R connectors on the recorder's front panel.

- When connecting monaural equipment, use only the recorder's AUDIO L connector.

2 SET INPUT MODE

Press **NUMBER** key "0" and/or **TV PROG** so that "F-1" appears in place of a channel number.

3 LOCATE START POINT

Press **PLAY** to start playback of the tape in your recorder, and press **PAUSE** when you find the point where you want to start dubbing.

4 ENGAGE AUDIO DUBBING

Press **A. DUB**.

- Your recorder enters the Audio Dubbing Pause mode. ("○" blinks, "▷" and "▯" light up on the front display panel.)
- To perform audio dubbbing with audio mixing, press **AUDIO** on the remote control to select "▶ + ◀ (L+R)" at this point.
  * Audio dubbing with audio mixing is not possible if you're using a monaural audio component, or if you don't have an audio mixer.

5 START DUBBING

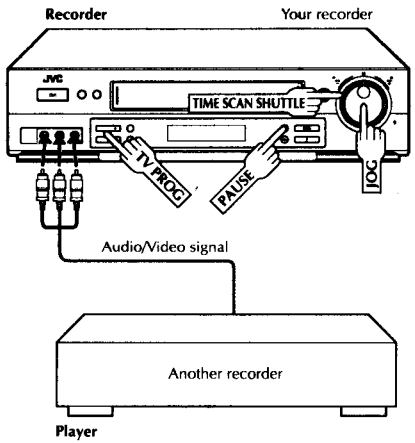
Engage the audio component's Play mode, then press **PLAY** to start the tape in your recorder. Audio dubbing begins at this point.

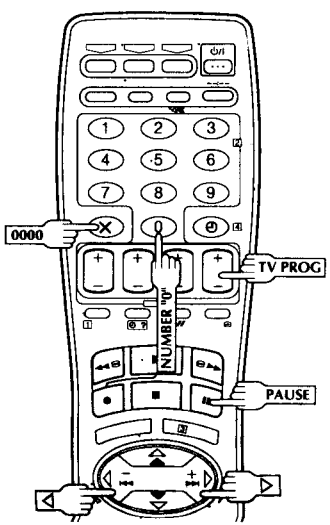
- "○" blinks and "▷" is displayed on the front display panel.
- To stop dubbing temporarily, press **PAUSE**. Press **PLAY** to resume dubbing.

6 END AUDIO DUBBING

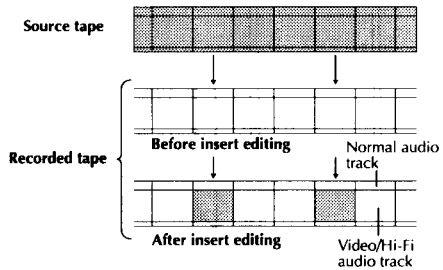
Press **STOP** to stop the tape in your recorder, and engage the audio component's Stop mode.

Insert Editing (HR-DD858E/EH only)





Insert editing replaces part of the recorded scene with new material. Both the picture and Hi-Fi audio soundtrack are replaced with new ones, while the normal audio soundtrack remains unchanged. If you wish to change the normal audio track as well, use the audio dubbing function simultaneously. Use your video recorder as the recorder.



1 MAKE CONNECTIONS

Connect the player's VIDEO OUT and AUDIO OUT connectors to your recorder's VIDEO and AUDIO connectors on the front panel.

2 SET INPUT MODE

Press **NUMBER** key "0" and/or **TV PROG** so that "F-1" appears in place of a channel number.

3 LOCATE END POINT

Load the recording cassette into your recorder, and play it back to determine the edit-out point (the end of the segment to be replaced) using the **JOG/TIME SCAN SHUTTLE** controls or ◁ ▷ and **PAUSE**.

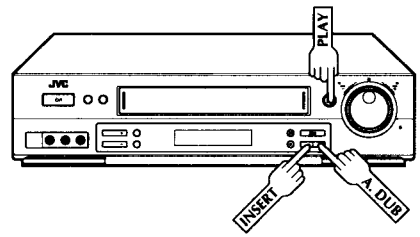
4 RESET THE COUNTER

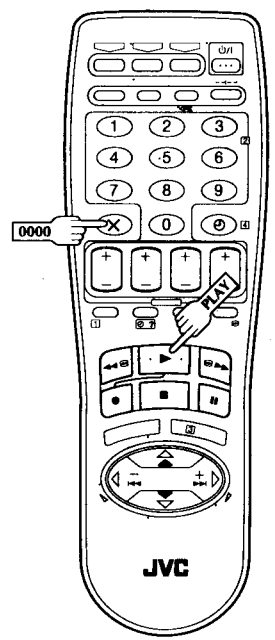
Press **0000** to change the counter display to "0:00:00".

5 LOCATE START POINT

Determine the edit-in point (the beginning of the segment to be replaced) using the **JOG/TIME SCAN SHUTTLE** controls or ◁ ▷ and **PAUSE**.

- Be sure to engage the Still mode at the edit-in point.





6 ENGAGE INSERT EDITING

Press **INSERT**.

- Your recorder enters the Insert-Pause mode. ("○", "▷" and "▥" light up on the front display panel.)
- The TV screen changes from the still picture to the input source you are going to record.

7 START EDITING

Load the source cassette and play back the segment that is to be inserted. When you reach the start of the section of the source tape that you wish to insert, press **PLAY** to start the tape in your recorder; Insert Editing begins at this point.

- "○" and "▷" are displayed on the front display panel.

8 END INSERT EDITING

At counter "0:00:00", Insert Editing will stop automatically while the tape continues running in the Play mode. If you wish to stop Insert Editing before the specified edit-out point, press **0000**.

FOR AV INSERT EDITING

If you want to replace the picture, Hi-Fi audio soundtrack and normal audio soundtrack all at the same time...

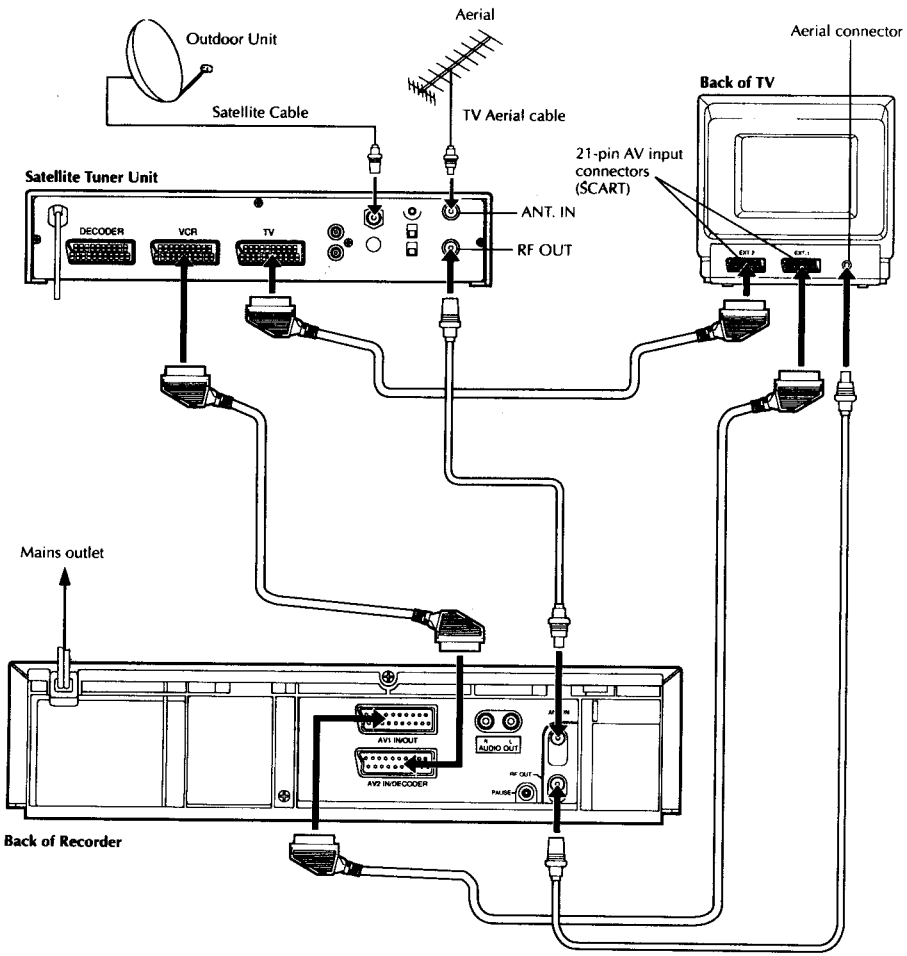
... In step **6** above, after you press **INSERT**, press **A. DUB** also. ("○" and "▷" blink and "▥" lights up on the front display panel.)

NOTES:

- *Suitable leads can be obtained from your dealer.*
- *Insert editing is not possible with cassettes whose safety tab has been removed.*
- *When insert editing is performed on a tape that has been recorded on another video recorder, the inserted portion may appear distorted.*
- *In insert editing, the recording speed (SP/LP) is determined by the previous recording to be replaced. If the previous recording's speed changes within a single edit, the inserted picture will be distorted at the switching point.*
- *A small portion of the recording which precedes an insert edit may become erased.*
- *Insert Editing is also possible using the rear panel AV1 IN/OUT or AV2 IN/DECODER connector. When using these connectors, make sure to select the correct input mode in step* **2**.

Connection To A Satellite Tuner

The AV2 IN/DECODER connector on the rear panel of your recorder allows simple connection to a satellite tuner.

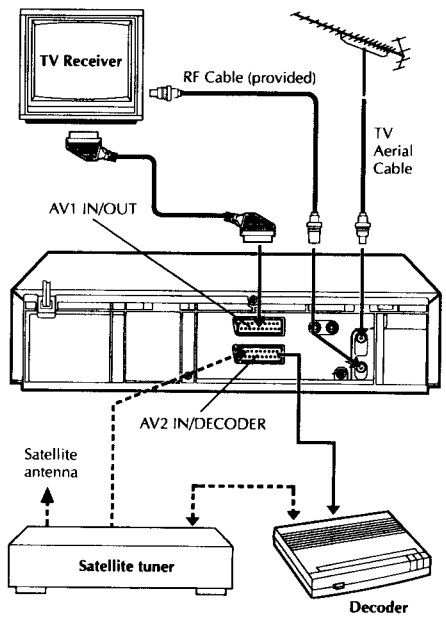


NOTE:

For details, check your satellite tuner's instruction manual.

Connecting/ Using A Decoder

The AV2 IN/DECODER connector can be used as an input terminal for an external decoder (descrambler). Simply connect a decoder and you can enjoy the variety of programming that is available through scrambled channels.



1 SELECT INPUT MODE

Set "AV2 SELECT" to "DECODER". (☞ pg. 37)

2 CONNECT DECODER

Connect your recorder's AV2 IN/DECODER connector to the decoder's Euroconnector using a 21-pin SCART cable.

3 SET TUNER

Perform the procedure as described in "When Receiving A Scrambled Broadcast" on page 49.

NOTE:

When Connecting A Satellite Tuner . . .

. . . if you don't have a decoder connect the satellite tuner directly to the video recorder's AV2 IN/DECODER connector.

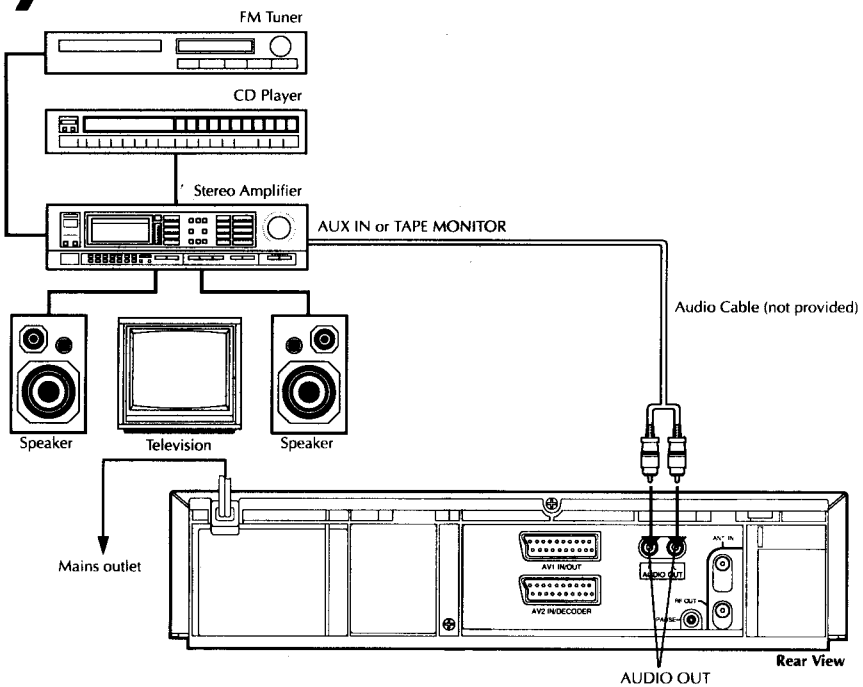
. . . if you have a decoder, first connect the decoder to the decoder input of the satellite tuner, then connect the satellite tuner's output to the recorder's AV2 IN/DECODER connector. Refer to the instruction book for the satellite tuner and decoder.

. . . set "AV2 SELECT" to "AV2". (☞ pg. 37)

*. . . to view a programme via the satellite tuner, select L-2 mode by pressing **NUMBER** keys and/or **TV PROG** so that "L-2" appears on the display panel.*

Connecting/ Using A Stereo System

These instructions enable you to connect your video recorder to your Hi-Fi stereo system (if you have one) and listen to the soundtrack through the stereo.



1 MAKE CONNECTIONS

Connect the AUDIO OUT L and R connectors on your video recorder to the AUX IN or TAPE MONITOR terminals on your stereo system's receiver or amplifier.

NOTES:

- *When connecting your recorder's audio output connectors to a stereo amplifier, make sure you connect L and R correctly.*
- *If stereo or bilingual TV broadcasts are receivable in your area, this recorder can record them independently of the TV set and play them back through the connected stereo system.*
- *When listening to sound through the connected stereo system, turn the TV's volume down completely.*

CAUTIONS:

- This recorder has a dynamic range of more than 80 dB with regards to its Hi-Fi audio capability. It is recommended that you check the maximum level if you are going to listen to the Hi-Fi audio signals through a stereo amplifier. A sudden surge in the input level to the speakers may damage them.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set as this can adversely affect the video playback picture.

Video Channel Set

Video Channel (RF Output Channel) is the channel on which your TV receives picture and sound signals from the video recorder through the RF cable.

IMPORTANT

Perform the following steps only if —
— Video Channel Set has not been done correctly by the Auto Set Up function (☞ pg. 4).
— interference appears in the TV picture after you have moved to a different area or a new station has started broadcasting in your area.
— you change the connection between your recorder and TV from RF connection to AV connection, or vice versa.

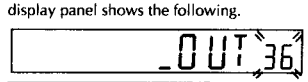
If you have connected the video recorder to your TV via both the RF cable and a 21-pin SCART cable (AV connection), since you do not need the video channel you have to set the video channel to off.

If you have connected the video recorder to your TV via the RF cable only (RF connection), you have to set the correct video channel.

Before performing the following steps, make sure the recorder's power is off and there is no cassette inserted in the recorder.

1 ACCESS VIDEO CHANNEL SET MODE

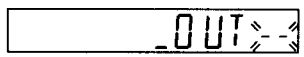
Hold down **STOP (■/⏏)** on the recorder until the display panel shows the following.



2 SET VIDEO CHANNEL

With AV Connection

Press **TV PROG –** until the display panel shows "_OUT– –".

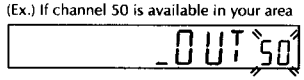


- Now the video channel is set to off.

With RF Connection

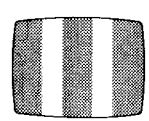
Press **TV PROG +** or **–** to set the video recorder to a vacant channel between 22 and 69 which is not occupied by any local station in your area.

(Ex.) If channel 50 is available in your area



Then set your TV to UHF channel 50.

- If the two vertical white bars appear clearly on the screen as shown to the right, go to step **3**.
- If the two vertical white bars do not appear clearly, re-set the video recorder to another vacant channel and try again.



NOTES:

- *If you set the video recorder to a channel which is occupied by a local station or has neighbouring channels that are occupied by local stations, the picture reception quality will be affected and some interference noise will appear on the TV screen. Be sure to select a vacant channel which has no broadcast on neighbouring channels.*
- *If you cannot obtain the two vertical white bars clearly with any channel between 22 and 69, consult your JVC dealer.*

3 EXIT VIDEO CHANNEL SET MODE

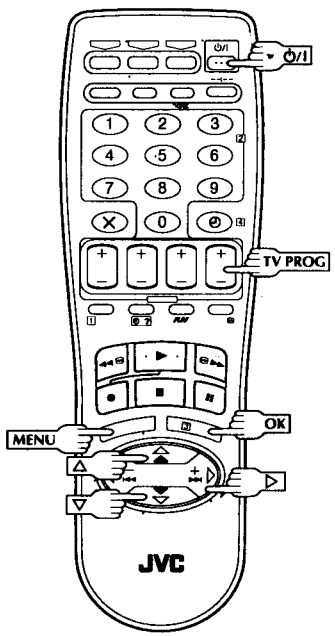
Press **OK** on the remote control.

With AV Connection:
To view picture signals from the video recorder, set your TV to its AV mode.

With RF Connection:
The channel on which the screen in step 2 appears clearly is your video channel.
To view picture signals from the video recorder, set your TV to the Video Channel.

Tuner Set

Turn on the TV and select the VIDEO channel (or AV mode).



IMPORTANT

Perform the following steps only if —
— Auto Channel Set has not been set correctly by Auto Set Up function (☞ pg. 4).
— you have moved to a different area or if a new station starts broadcasting in your area.

Your recorder needs to memorize all necessary stations in channel positions in order to record TV programmes. Auto Channel Set automatically assigns all receivable stations in your area to call them up by using the **TV PROG** buttons without going through any vacant channel.

Auto Channel Set

1 TURN ON THE RECORDER

Press ⏻/I.

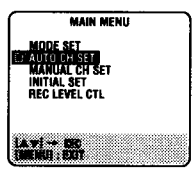
2 ACCESS MAIN MENU SCREEN

Press **MENU**.

3 ACCESS COUNTRY SET SCREEN

Press △▽ to move the highlight bar (pointer) to "AUTO CH SET", then press **OK** or ▷.

- "REC LEVEL CTL" appears only with the HR-DD858E and HR-DD858EH.

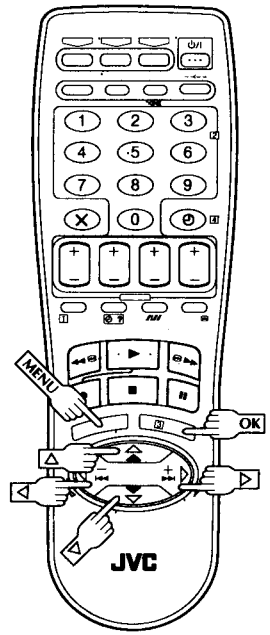


4 SELECT COUNTRY

Press △▽ to move the highlight bar (pointer) to your country's name, then press **OK** or ▷.

5 SELECT LANGUAGE

Press △▽ to move the highlight bar (pointer) to the language of your choice.



IMPORTANT

- In certain reception conditions, station names may not be stored correctly, and auto Guide Program Number Set may not work properly. If the Guide Program numbers are not set properly, when you timer-record a TV programme using SHOWVIEW, the recorder will record a TV programme of a different station. When programming the timer using SHOWVIEW, be sure to check whether the channel position on which your recorder receives the broadcasting station you wish to record is selected (☞ pg. 26, "SHOWVIEW Timer Programming").
- Your video recorder memorizes all detected stations even if reception of some of them is poor. In these cases picture quality may be poor. To delete those stations with an unacceptable picture ☞ "Delete A Channel" on page 49.

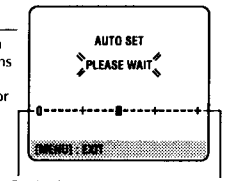
NOTES:

- *Fine tuning is performed automatically during Auto Channel Set. If you want to perform it manually, refer to page 52.*
- *If you perform Auto Channel Set when the aerial cable is not connected properly, "SCAN COMPLETED -NO SIGNAL-" appears on the screen in step 7. When this happens, make sure of the aerial connection and press **OK**; Auto Channel Set will take place again.*

6 PERFORM AUTO CHANNEL SET

Press **OK** or ▷.

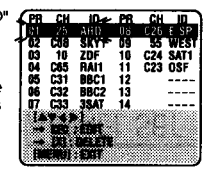
- The Auto Set screen appears, and remains on screen while the recorder searches for receivable stations. As Auto Channel Set progresses, the "■" mark on the screen moves from left to right.



Wait until the screen as shown in step 7 appears.

7 VIEW CONFIRMATION SCREEN

After "SCAN COMPLETED" is displayed on the screen for about 5 seconds, the Confirmation screen looking like the one to the right appears. The stations your recorder located appear on a Confirmation screen — channel positions (PR), channels (CH) and station names (ID – ☞ pg. 51). The blueback screen and the programme currently being broadcast by the blinking station appear alternately for 8 seconds each.
To view the next page, use the △▽◁▷ button on the remote control.


PR CH ID PR CH ID
01 25 ARD 05 C26 E SP
02 C38 SKY1 09 35 WEST
03 10 ZDF 10 C24 SAT1
04 C35 RAI1 11 C23 OSF
05 C31 BBC1 12 ----
06 C32 BBC2 13 ----
07 C33 3SAT 14 ----
MENU : EXIT

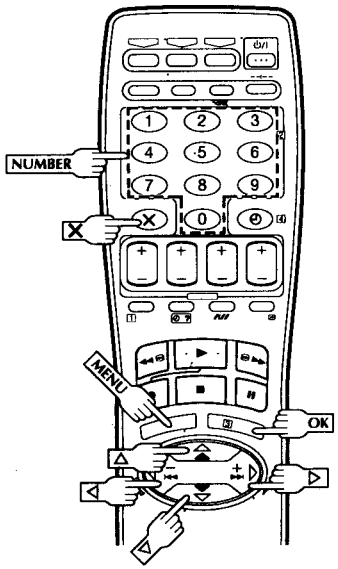
C: Cable

- The stations located in the selected country appear at the top of the list.
- The Guide Program numbers will also be set automatically during Auto Channel Set.

8 RETURN TO NORMAL SCREEN

Press **MENU**.

- Using the Confirmation screen, you can skip or add channel positions, enter station names and perform other operations. Refer to pages 48 – 52 for the procedures.
- Depending on reception conditions, the stations may not be stored in order, and the station names may not be stored correctly.
- For information on scrambled broadcasts, refer to page 49.



Storing Channels Manually

Store channels that were not stored during Auto Set Up (☞ pg. 4) or Auto Channel Set (☞ pg. 46).

1 ACCESS MAIN MENU

Press **MENU**.

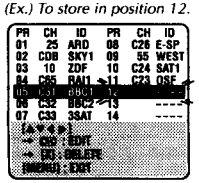
2 ACCESS CONFIRMATION SCREEN

Press △▽ to move the highlight bar (pointer) to "MANUAL CH SET", then press **OK** or ▷. The Confirmation screen appears.

3 SELECT POSITION

Press △▽◁▷ until an open position in which you want to store a channel begins blinking, then press **OK**. The Manual Channel Set screen appears.

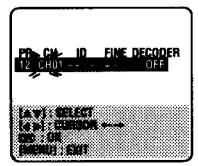
(Ex.) To store in position 12.


PR CH ID PR CH ID
01 25 ARD 08 C26 E-SP
02 C08 SKY1 09 55 WEST
03 10 ZDF 10 C24 SAT1
04 C65 RAI1 11 C23 OSF
05 C31 BBC1 12
06 C32 BBC2 13 ----
07 C33 3SAT 14 ----
[▲▼◀▶]:
CH : EDIT
OK : MANUAL CH SET
[MENU] : EXIT

The blueback screen and the programme currently being broadcast by the selected channel appear alternately for 8 seconds each.

4 SELECT BAND

Press △▽ to change the band between CH (regular) and CC (cable), then press ▷.



The blueback screen and the programme currently being broadcast by the selected channel appear alternately for 8 seconds each.

5 INPUT CHANNEL

Press the **NUMBER** keys to input the channel number you want to store.

- Input "0" before any single number entries.
- To input the registered station name (ID - ☞ pg. 51), press ▷ until "----" (ID setting) begins blinking, then press △▽.
- For fine tuning adjustment, press ▷ until "+/–" begins blinking, then press △▽. While tuning, "+" or "–" appears.
- When storing a channel that sends scrambled broadcasts, press ▷ until "OFF" (Decoder setting) blinks, then press △▽ to set "DECODER" to "ON" ("OFF" is the default setting).
- When "AV2 SELECT" is set to "AV2", the "DECODER" setting cannot be changed (☞ pg. 37).

6 ENTER NEW CHANNEL INFORMATION

Press **OK** and the Confirmation screen appears.

- Repeat steps **3** through **6** as necessary.

7 CLOSE CONFIRMATION SCREEN

Press **MENU**.

- To change positions, see "Change Station Channel Position" (☞ pg. 49).
- If you wish to set station names other than the ones registered in your recorder, ☞ "Set Stations (B)" on page 50.

ATTENTION

After you have stored channels manually, be sure to perform Guide Program Number Set (☞ pg. 53) in order to get proper results from SHOWVIEW timer recording.

Delete A Channel

Perform steps **1** and **2** of "Storing Channels Manually" on page 48 to access the Confirmation screen before continuing.

1 SELECT ITEM

Press △▽◁▷ until the item you want to delete begins blinking.

2 DELETE CHANNEL

Press X.

- The item directly beneath the cancelled one moves up one line.
- Repeat steps **1** and **2** as necessary.

3 CLOSE CONFIRMATION SCREEN

Press **MENU**.

Change Station Channel Position

Perform steps **1** and **2** of "Storing Channels Manually" on page 48 to access the Confirmation screen before continuing.

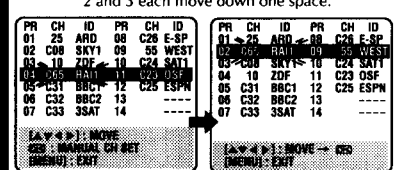
1 SELECT ITEM

Press △▽◁▷ until the item you want to move begins blinking. Then press **OK** and the station name (ID) and its channel (CH) number begin blinking.

2 SELECT NEW POSITION

Press △▽◁▷ to move the station to the new channel position, then press **OK**.

Example: If you moved the station in position 4 to position 2, the stations originally in positions 2 and 3 each move down one space.


PR CH ID PR CH ID
01 25 ARD 08 C26 E-SP
02 C08 SKY1 09 55 WEST
03 10 ZDF 10 C24 SAT1
04 C65 RAI1 11 C23 OSF
05 C31 BBC1 12 C25 ESPN
06 C32 BBC2 13 ----
07 C33 3SAT 14 ----
[▲▼◀▶]: MOVE
OK : MANUAL CH SET
[MENU] : EXIT
[▲▼◀▶]: MOVE → OK
[MENU] : EXIT

- Repeat steps **1** and **2** as necessary.

3 CLOSE CONFIRMATION SCREEN

Press **MENU**.

ATTENTION

After you have deleted channels or changed channel positions, be sure to perform Guide Program Number Set (☞ pg. 53) in order to get proper results from SHOWVIEW timer recording.

When Receiving A Scrambled Broadcast

1 SELECT DECODER MODE

Set "AV2 SELECT" to "DECODER" (☞ pg. 37).

2 ACCESS CONFIRMATION SCREEN

Perform steps **1** and **2** of "Storing Channel Manually" on page 48.

3 SELECT POSITION

Press △▽◁▷ to select the channel position broadcasting scrambled programmes, then press **OK** twice.

4 CHANGE DECODER SETTING

Press ▷ until "OFF" (decoder setting) begins blinking, and set it to "ON" by pressing △▽.

5 RETURN TO CONFIRMATION SCREEN

Press **OK**.

- Repeat steps **3** through **5** as necessary.

6 CLOSE CONFIRMATION SCREEN

Press **MENU**.

Set Stations (A)

Set station names that are registered in your recorder.

Perform steps **1** and **2** of "Storing Channels Manually" on page 48 to access the Confirmation screen before continuing.

1 SELECT ITEM

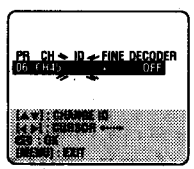
Press △▽◁▷ until the item you want begins blinking.

2 ACCESS MANUAL CHANNEL SET SCREEN

Press **OK** twice.

3 SELECT NEW STATION

Press ▷ until the station name (ID) begins blinking, then press △▽ until the new station's name (ID) you want to store begins blinking.
Registered station names (☞ pg. 51) appear as you press △▽.



4 SWITCH STATIONS

Press **OK**.

- The Confirmation screen appears.
- Repeat steps **1** through **4** as necessary.

5 CLOSE CONFIRMATION SCREEN

Press **MENU**.

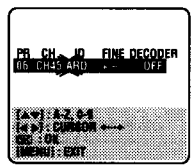
Set Stations (B)

Set station names other than the ones registered in your recorder.

Perform steps **1** and **2** of "Storing Channels Manually" on page 48 to access the Confirmation screen and then perform step **1** and **2** of "Set Stations (A)" on the left before continuing.

1 SELECT STATION NAME CHARACTER

Press ▷ until the first letter of the station name begins blinking.



2 ENTER NEW CHARACTER

Press △▽ to cycle through the characters (A–Z, 0–9, –, ✱, +, _ (space)) and stop when the desired character is indicated, then press ▷ to enter. Enter the remaining characters the same way (maximum of 4).
After entering all characters, press **OK**.

- The Confirmation screen appears.
- If you make a mistake, press ◁ until the incorrect character begins blinking. Then enter the correct character by pressing △▽.

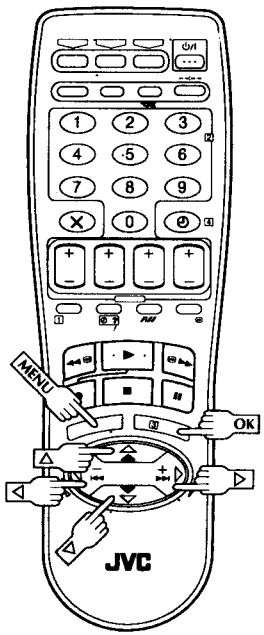
3 CLOSE CONFIRMATION SCREEN

Press **MENU**.

TV Station And ID List

ID*	STATION NAME
1000	TV1000
3SAT	3SAT
ADLT	ADULT
ANT3	ANTENA3
ARD	ARD
ARTE	ARTE
BBC	BBC GROUP
BBC1	BBC1
BBC2	BBC2
BR3	BAYERN3
C+	CANAL PLUS
C1	PORTUGUSES
CAN5	CANALE5
CH4	CHANNEL4
CH5	CHANNEL5
CHLD	CHILD
CINE	CINEMA
CLUB	TELECLUB
CMT	CMT
CNN	CNN
CSUR	ANDALUCIA
DISC	DISCOVERY
DR	DR TV
DRS	DRS
DSF	DSF
ETB1	ETB1
ETB2	ETB2
EURO	EURONEWS
EUSP	EUROSPORTS
FEMM	FEMMAN
FILM	FILM
FNET	FILMNET
FR2	France2
FR3	France3
GALA	GALAVISION
HR3	HESSEN3
INFO	INFO-KANAL
ITA1	ITALIA1
ITA7	ITALIA7
ITV	ITV
JSTV	JSTV
KA2	KA2
KAB1	KABEL1
KAN2	KANAL2
LOCA	LOCAL
M6	M6
MBC	MBR
MCM	MCM
MDR	MDR
MOVE	MOVIE
MTV	MTV
MTV3	MTV3
N3	NORD3
N-TV	N-TV
NBC	NBC SUPER
NDR3	NDR3
NED1	NED1
NED2	NED2
NED3	NED3
NEWS	
NICK	NICKELODEON
NRK	NRK
NRK2	NRK2
ODE	ODEON
ORF1	ORF1
ORF2	ORF2
ORF3	ORF3
OWL3	OWL3
PREM	PREMIERE
PRO7	PRO7
RAI1	RAI1
RAI2	RAI2
RAI3	RAI3
RET4	RETE4
21	TELE21
RTBF	RTBF1 or 2
RTL	RTL
RTL2	RTL2
RTL4	RTL4
RTL5	RTL5
RTP	RTP
S4	SCHWEIZ4
SAT1	SAT1
SBS	SBS
SHOW	SHOW
SIC	SOCIEDADE
SKY	SKY CHANNEL
SKYN	SKY NEWS
SPRT	SPORT
SRTL	SUPER RTL
STAR	STAR-TV
SVT1	SVT1
SVT2	SVT2
SW3	SUEDWEST3
TCC	TCC
TELE	TELE
TEL5	TELE5
TF1	TF1
TM3	TM3
TMC	TELEMONTECARLO
TNT	TNT INT
TRT	TRT INT
TSI	TSI
TSR	TSR
TV1	BRTN TV1
TV2	BRTN TV2
TV3	TV3
TV4	TV4
TV5	TV5
TV6	TV6
TVE1	TVE1
TVE2	TVE2
TVG	TV GALICIA
TVI	TV INDEPENDENT
TVN	TV NORGE
VCR	VIDEO
VERO	VERONICA
VH-1	VH-1
VIVA	VIVA
VIV2	VIVA2
VMTV	VIDEO MUSIC
VOX	VOX
VT4	VT4
VTM	VTM
WDR1	West1
WDR3	West3
YLE1	YLE1
YLE2	YLE2
ZDF	ZDF
ZTV	ZTV

* The "ID" abbreviation is what is shown on-screen in lieu of the station name. The "ID" abbreviation is listed in the Confirmation screen and is displayed on the TV screen when the recorder is tuned to a different station.



Fine-Tuning Channels Already Stored

Perform steps **1** and **2** of "Storing Channels Manually" on page 48 to access the Confirmation screen before continuing.

1 SELECT CHANNEL TO FINE-TUNE

Press △▽◁▷ until the channel you want to tune begins blinking.

2 ACCESS MANUAL CHANNEL SET SCREEN

Press **OK** twice. The Manual Channel Set screen appears.

3 PERFORM TUNING

Press ▷ until "+/–" begins blinking, then press △▽ until the picture is its clearest. Then press **OK**.

- The Confirmation screen appears.
- Repeat steps **1** through **3** as necessary.

4 CLOSE CONFIRMATION SCREEN

Press **MENU**.

SHOWVIEW Setup

IMPORTANT

Normally, Auto Set Up (☞ pg. 4) or Auto Channel Set (☞ pg. 46) sets the Guide Program Numbers automatically. You need to set the Guide Program Numbers manually only in the following cases.

- *When timer-programming with SHOWVIEW, the channel position, where the station you wish to record is received on your recorder, is not selected.*
  — Set the Guide Program Number for that station manually.
- *When you add/delete a channel or change channel positions manually after Auto Set Up or Auto Channel Set has taken place.*
  — Set the Guide Program Numbers for all the receivable stations manually.
- *When you wish to timer-record a satellite programme with SHOWVIEW.*
  — Set the Guide Program Numbers for all satellite broadcasts received on your satellite tuner.

Turn on the TV and select the VIDEO channel (or AV mode).

Guide Program Number Set

1 ACCESS MAIN MENU SCREEN

Press **MENU**.

2 ACCESS INITIAL SET SCREEN

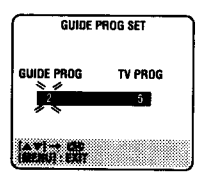
Press △▽ to move the highlight bar (pointer) to "INITIAL SET", then press **OK** or ▷.

3 ACCESS GUIDE PROG SET SCREEN

Press △▽ to move the highlight bar (pointer) to "GUIDE PROG SET", then press **OK** or ▷.

4 ENTER GUIDE PROG NUMBER

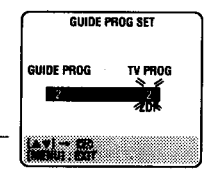
Press △▽ or **NUMBER** keys to enter the Guide Program number for the desired station as shown in the TV listings. Then press **OK** or ▷.



(Ex.) When inputting the Guide Program number 2 for ZDF.

5 ENTER RECEIVING CHANNEL POSITION NUMBER

Press △▽ or **NUMBER** keys to input the number of the recorder's channel position on which the Guide Program number's broadcast is received. Then press **OK** or ▷.



(Ex.) If ZDF is received on channel position 2.

- If the satellite broadcast is received on your recorder's auxiliary channel "L-2", select "L-2" for the channel position.
- Repeat steps **4** and **5** as necessary.

6 RETURN TO NORMAL SCREEN

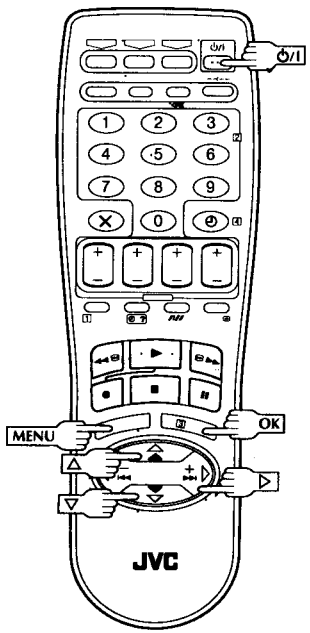
Press **MENU**.

Guide Program Number

"Guide Program (GUIDE PROG) number" refers to the assigned TV station numbers, according to broadcast area, for SHOWVIEW timer recording. The Guide Program numbers can be found in most TV listings.

Clock Set

Turn on the TV and select the VIDEO channel (or AV mode).



Just Clock
The Just Clock function provides accurate time keeping through automatic adjustments at regular intervals, by reading data from a PDC signal.
The Just Clock option can be set "ON" or "OFF" at the Clock Set screen (the default setting is "OFF"). Press **OK** until the Just Clock setting begins blinking, then press △▽ to change the setting.

IMPORTANT: If you turn off Just Clock, the accuracy of your recorder's built-in clock may be reduced, which could adversely effect timer recording. We recommend you to keep Just Clock on. In cases where the clock setting data from a PDC signal is incorrect, however, you are advised to keep Just Clock set to "OFF".

IMPORTANT
If you performed Auto Set Up (☞ pg. 4) or Auto Channel Set (☞ pg. 46), without ever having set the clock previously, the recorder's built-in clock is also set automatically. Perform the following steps only if —
— Auto Clock Set has not been performed correctly by Auto Set Up or Auto Channel Set.
or
— the recorder's memory backup has expired.
or
— you want to change Just Clock setting (☞ "Just Clock" in the left column).

1 TURN THE RECORDER ON

Press ⏻/I.

2 ACCESS MAIN MENU SCREEN

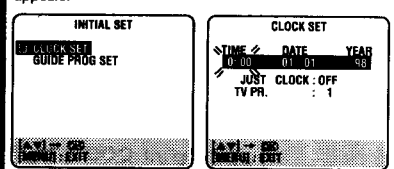
Press **MENU**.

3 ACCESS INITIAL SET SCREEN

Move the highlight bar (pointer) to "INITIAL SET" by pressing △▽, then press **OK** or ▷.

4 ACCESS CLOCK SET SCREEN

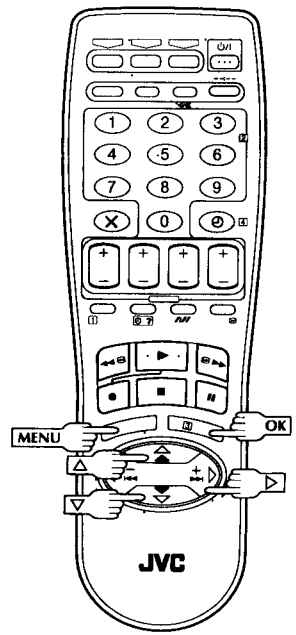
Move the highlight bar (pointer) to "CLOCK SET" by pressing △▽, then press **OK** or ▷. The Clock Set screen appears.



5 SET DATE AND TIME

Press △▽ to set the time, then press **OK** or ▷. The "date" display begins blinking. Repeat the same procedure to set the date and year.

- When you set the time, press and hold △▽ to change the time by 30 minutes.
- When you set the date, press and hold △▽ to change the date by 15 days.



6 SET JUST CLOCK

The default setting is "OFF". Set as desired by pressing △▽, then press **OK** or ▷.

- For the Just clock function, ☞ "Just Clock" on page 54.
- If you set to "OFF", you can disregard the next step as you won't be able to receive regular clock adjustments.

7 SET CLOCK DATA SOURCE CHANNEL POSITION

The recorder is preset to receive clock setting and adjustment data from channel position 1. Press △▽ to set the channel position to the number representing the station transmitting clock setting data, then press **OK** or ▷.

8 START CLOCK OPERATION

Press **MENU**.

NOTES:

- *Just Clock (when set to "ON") adjusts the recorder's built-in clock every hour, except for 23:00, 0:00, 1:00 and 2:00.*
- *Just Clock is not effective when . . .*
  - *the recorder's power is on.*
  - *the recorder is in the Timer mode.*
  - *a difference of more than 3 minutes exists between the built-in clock's time and the actual time.*
  - *the recorder is in the Auto Satellite Prog Rec mode (☞ pg. 32).*
  - *the recorder is in the Power Save mode (☞ pg. 9).*
- *If Just Clock is set to "ON", the recorder's clock is automatically adjusted at the start/end of Summer Time.*
- *Just Clock may not function properly depending on the reception condition.*

Before requesting service for a problem, use this chart and see if you can repair the trouble yourself. Small problems are often easily corrected, and this can save you the trouble of sending your video recorder off for repair.

POWER

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. No power is applied to the recorder.	• The mains power cord is disconnected.	Connect the mains power cord.
2. The clock is functioning properly, but the recorder cannot be powered.	• "◴" is displayed on the display panel with Auto Timer set to "OFF".	Press the ◴ button to turn the "◴" indicator off.
3. The remote control won't function.	• The batteries are discharged.	Replace the dead batteries with new ones.

TAPE TRANSPORT

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The tape does not run during recording.	• "▤" is displayed on the display panel.	Press **PLAY** to turn the "▤" indicator off.
2. The tape will not rewind or fast-forward.	• The tape is already fully rewound or fast-forwarded.	Check the cassette.

PLAYBACK

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The playback picture does not appear while the tape is running.	• If you're using the RF OUT connection . . . . . . the TV receiver's channel selector is not set to the VIDEO channel. . . . the recorder's VIDEO channel has not been correctly set. • If you're using the AV connection, the TV receiver is not set to the AV mode.	If you are using the RF OUT connection . . . . . . set the TV receiver to the VIDEO channel. (☞ pg. 5) . . . perform "Video Channel Set". (☞ pg. 45) If you are using the AV connection, set the TV to its AV mode.
2. Noise appears during normal playback.	• The automatic tracking mode is engaged.	Try manual tracking. (☞ pg. 14)
3. The playback picture is blurred or interrupted while TV broadcasts are clear.	• The video heads may be dirty.	Consult your JVC dealer.
4. Breaks are noticeable in Hi-Fi soundtrack	• Automatic tracking is engaged.	Engage and adjust tracking manually. (☞ pg. 14)

RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Recording cannot be started.	• There is no cassette loaded, or the cassette loaded has had its Record Safety tab removed.	Insert a cassette, or using adhesive tape, reseal the slot where the tab was removed.
2. TV broadcasts cannot be recorded.	• "L-1", "L-2" or "F-1" has been selected as the input mode.	Set to the desired channel.
3. Tape-to-tape editing is not possible.	• The source (another video recorder, camcorder) has not been properly connected. • All necessary power switches have not been turned on. • The input mode is not correct.	Confirm that the source is properly connected. Confirm that all units' power switches are turned on. Set the input mode to "L-1", "L-2" or "F-1".
4. Camcorder recording is not possible.	• The camcorder has not been properly connected. • The input mode is not correct.	Confirm that the camcorder is properly connected. Set the input mode to "L-1", "L-2" or "F-1".

TIMER RECORDING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Timer recording won't work.	• The clock and/or the timer have been set incorrectly. • The timer is not engaged.	Re-perform the clock and/or timer settings. Press ◴ and confirm that "◴" is displayed on the display panel.
2. Timer programming is not possible.	• Timer recording is in progress.	Timer programming can't be performed while a timer recording is in progress. Wait until it finishes.
3. "◴" and "▭" on the display panel won't stop blinking.	• The timer is engaged but there's no cassette loaded.	Load a cassette with the Record Safety tab intact, or cover the hole using adhesive tape.
4. The cassette is automatically ejected, and "◴" and "▭" on the display panel won't stop blinking.	• The loaded cassette has had its Record Safety tab removed.	Remove the cassette and cover the hole with adhesive tape, or insert a cassette with the Record Safety tab intact.
5. "◴" blinks for 10 seconds and the Timer mode is disengaged.	• ◴ has been pressed when there are no programs in memory, or the timer record information has been programmed incorrectly.	Check the programmed data and re-program as necessary, then press ◴ again.
6. The cassette is automatically ejected, the power shuts off and "◴" and "▭" won't stop blinking.	• The end of the tape was reached during timer recording.	The programme may not have been recorded in its entirety. Next time make sure you have enough time on the tape to record the entire programme.
7. SHOWVIEW does not timer-record properly.	• The recorder's channel positions have been set incorrectly.	Refer to "Guide Program Number Set" and re-perform the procedure (☞ pg. 53).

OTHER PROBLEMS

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Whistling or howling is heard from the TV during camcorder recording.	• The camcorder's microphone is too close to the TV. • The TV's volume is too high.	Position the camcorder so its microphone is away from the TV. Turn the TV's volume down.
2. When scanning channels, some of them are skipped over.	• Those channels have been designated to be skipped.	If you need the skipped channels, restore them (☞ pg. 48).
3. The channel cannot be changed.	• Recording is in progress.	Press **PAUSE** to pause the recording, change channels, then press **PLAY** to resume recording.
4. Channel settings that were made manually seem to have changed or disappeared.	• After the manual settings were made, Auto Channel Set was performed.	Perform manual setting again.
5. No channels are stored in the recorder's memory.	• The TV aerial cable was not connected to the recorder when Auto Set Up was performed.	Connect the TV aerial cable to the recorder properly and turn off the recorder power once, then turn the recorder power back on again. The recorder will try Auto Set Up again (☞ pg. 4).
6. The remote control won't operate the TV or satellite tuner.	• The remote control brand setting is incorrect.	Re-set the remote control to the correct brand (☞ pg. 34, 35).

PLAYBACK

Q. What happens if the end of the tape is reached during playback or search?
A. The tape is automatically rewound to the beginning.

Q. Can the video recorder indefinitely remain in the still mode?
A. No. It stops automatically after 5 minutes to protect the heads.

Q. When returning from multi-speed search to normal playback, the picture is disturbed. Should I be concerned about this?
A. No, it is normal.

Q. Other than preventing further recording, what effect does removing the Record Safety tab have?
A. It disables marking of index codes.

Q. Sometimes, during Index Search, the video recorder can't find the programme I want to see. Why not?
A. There may be index codes too close together.

RECORDING

Q. When I pause and then resume a recording, the end of the recording before the pause is overlapped by the beginning of the continuation of recording. Why does this happen?
A. This is normal. It reduces distortion at the pause and resume points.

Q. Can the video recorder indefinitely remain in the Record-Pause mode?
A. No. The video recorder goes to its Stop mode automatically after 5 minutes to protect the heads.

Q. What happens if the tape runs out during recording?
A. The video recorder automatically rewinds it to the beginning.

TIMER RECORDING

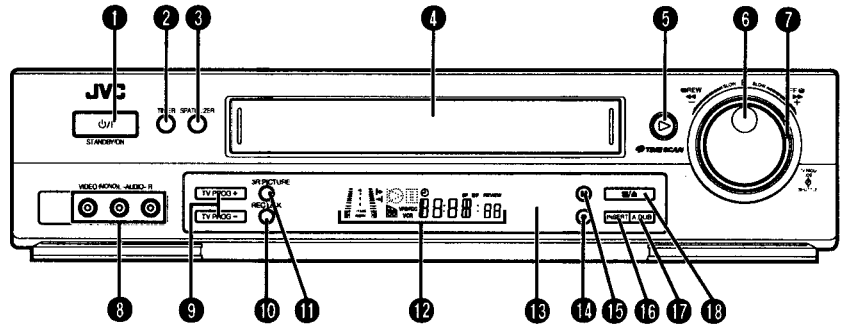
Q. "○" and "⊖" remain lit on the display panel. Is there a problem?
A. No. This is a normal condition for a timer recording in progress.

Q. Can I programme the timer while I'm watching a tape or a TV broadcast?
A. You won't see the picture as it is replaced by the on-screen menu, but the audio from the programme or tape you're viewing can be heard.

Q. Is it possible to timer-record a TV programme broadcast in 2000?
A. Yes, it is possible.

ATTENTION
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the recorder off and unplug the mains power cord. Then plug it in again and turn the recorder on. Take out the cassette. After checking the cassette, operate the unit as usual.

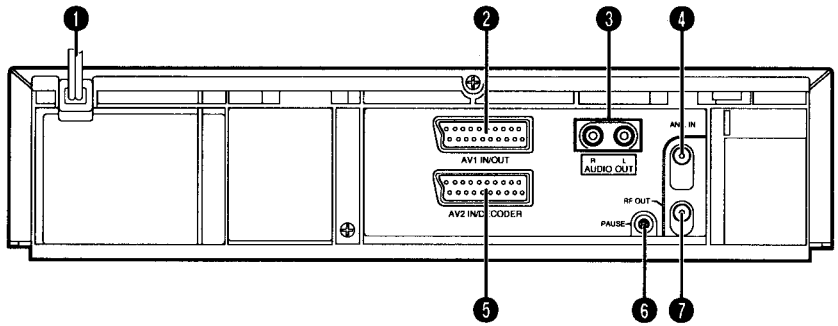
FRONT VIEW



Attach the provided connector cover when you do not use the front panel connectors.

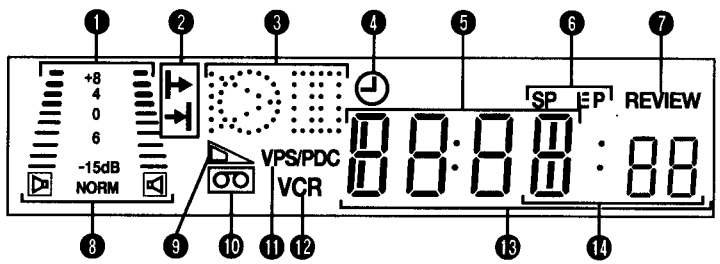
1. STANDBY/ON ⏻/I Button ☞ pg. 4
2. TIMER Button ☞ pg. 27, 29
3. SPATIALIZER Button ☞ pg. 16
4. Cassette Loading Slot
5. PLAY Button ☞ pg. 11
6. TV PROG Dial ☞ pg. 20
   JOG Dial ☞ pg. 12, 13
7. TIME SCAN SHUTTLE Ring ☞ pg. 12 (HR-DD858E/EH)
   SHUTTLE Ring ☞ pg. 13 (HR-J758E/EH)
8. VIDEO/AUDIO Input Connectors ☞ pg. 38
9. TV PROG +/– Buttons ☞ pg. 20
10. REC LINK Button ☞ pg. 32
11. 3R PICTURE Button ☞ pg. 14
12. Display Panel ☞ pg. 60
13. Infrared Beam Receiving Window
14. RECORD Button ☞ pg. 20
15. PAUSE Button ☞ pg. 12, 13
16. INSERT Button ☞ pg. 40 (HR-DD858E/EH)
    SP/LP Button ☞ pg. 20 (HR-J758E/EH)
17. A. DUB [Audio Dubbing] Button ☞ pg. 39 (HR-DD858E/EH)
    DISPLAY Button ☞ pg. 21 (HR-J758E/EH)
18. STOP/EJECT Button ☞ pg. 11

REAR VIEW



❶ Mains Power Cord ☞ pg. 3
❷ AV1 IN/OUT Connector ☞ pg. 3, 36
❸ AUDIO OUT (L/R) Connectors ☞ pg. 44
❹ ANT. IN Connector ☞ pg. 3
❺ AV2 IN/DECODER Connector ☞ pg. 37,42, 43
❻ Remote PAUSE Connector ☞ pg. 38
❼ RF OUT Connector ☞ pg. 3

DISPLAY PANEL



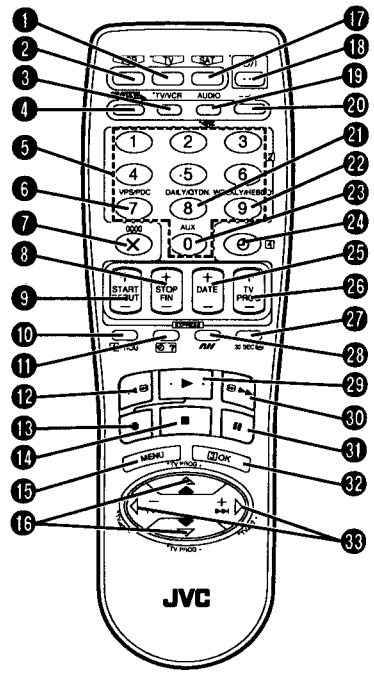
❶ B.E.S.T. Picture System Display ☞ pg. 24
Audio Level Indicator ☞ pg. 23
❷ Programme Time Indicators ☞ pg. 28
❸ Symbolic Mode Indicators

PLAY: FF/REW VARIABLE SHUTTLE SEARCH:	▷	STILL: SLOW:	▷Ⅱ
		RECORD:	○
		RECORD PAUSE:	○Ⅱ
AUDIO DUBBING*:			
AUDIO DUBBING PAUSE*:			Ⅱ
INSERT*:			
INSERT PAUSE*:			Ⅱ
AUDIO DUBBING INSERT*:			
AUDIO DUBBING INSERT PAUSE*:			Ⅱ

* HR-DD858E/EH only.

❹ "Timer" Indicator ☞ pg. 27, 29
❺ Channel/Clock Display ☞ pg. 6
❻ Tape Speed Indicators ☞ pg. 20
EP is only for NTSC playback
❼ Instant REVIEW Indicator ☞ pg. 15
❽ Audio Mode Indicator ☞ pg. 16
❾ Tape Remaining Time Indicator ☞ pg. 21
❿ "Cassette Loaded" Mark
⓫ VPS/PDC Indicator ☞ pg. 27, 29
⓬ VCR Indicator ☞ pg. 21
⓭ Counter/Remain Display
⓮ Mode Display (L-1, L-2 or F-1)

REMOTE CONTROL



Buttons with a small dot on the left side of the name can also be used to operate your TV ☞ pg 34.

❶ TV Button ☞ pg. 34
❷ VCR Button ☞ pg. 34
❸ TV/VCR Button ☞ pg. 21, 34
❹ REVIEW Button ☞ pg. 15
❺ NUMBER Keys ☞ pg. 20, 26
❻ VPS/PDC Button ☞ pg. 27, 29
❼ ✕ Button ☞ pg. 30
0000 Button ☞ pg. 21
❽ STOP +/– Button ☞ pg. 28
❾ START +/– Button ☞ pg. 28
❿ PROG Button ☞ pg. 26
⓫ ◴ ? Button ☞ pg. 30
⓬ Rewind [REW] Button ☞ pg. 11, 12, 13
⓭ Record Button ☞ pg. 20
⓮ Stop Button ☞ pg. 11, 20
⓯ MENU Button ☞ pg. 7
⓰ △▽ Button ☞ pg.4
TV PROG +/– ☞ pg. 34
⓱ SAT Button ☞ pg. 35
⓲ STANDBY/ON ⏻/I Button ☞ pg. 4
⓳ AUDIO Button ☞ pg. 16
🔊/🔇 (TV Muting) Button ☞ pg. 34
⓴ DISPLAY Button ☞ pg. 21
㉑ DAILY Button ☞ pg. 27, 29
㉒ WEEKLY Button ☞ pg. 27, 29
㉓ AUX Button ☞ pg. 36
㉔ ◴ Button ☞ pg. 27, 29
㉕ DATE +/– Button ☞ pg. 28
㉖ TV PROG +/– Button ☞ pg. 20
㉗ 30 SEC Button ☞ pg. 15
㉘ Auto Tracking Button ☞ pg. 14
SP/LP Button ☞ pg. 20
㉙ Play Button ☞ pg. 11
㉚ Fast Forward [FF] Button ☞ pg. 11, 12, 13
㉛ Pause Button ☞ pg. 12, 13
㉜ OK Button ☞ pg. 5
㉝ ◁ ▷ Button ☞ pg. 12, 13, 15
TV ◿ +/–Button ☞ pg. 34

How To Use

The remote control can operate most of your video recorder's functions, as well as basic functions of TV sets and satellite tuners of JVC and other brands. ☞ pg. 34, 35.
- Point the remote control toward the sensor window.
- The maximum operating distance of the remote control is about 8 m.

NOTES:

- *When inserting the batteries, be sure to insert in the correct directions as indicated under the battery cover.*
- *If the remote control doesn't work properly, remove its batteries, wait a short time, replace the batteries and then try again.*

ATTENTION

The remote control can operate not only the video recorder but also some of your TV and satellite tuner's functions.
- To operate your video recorder, first press the **VCR** button to set the remote control to the Video mode.
- To operate your TV, first press the **TV** button to set the remote control to the TV mode (☞ pg. 34).
- To operate your satellite tuner, first press the **SAT** button to set the remote control to the Satellite tuner mode (☞ pg. 35).

GENERAL

Power requirement	: AC 220 – 240 V~, 50/60 Hz
Power consumption	
Power on	: 24 W
Power off	: 5.5 W
Power save (HR-J758E and HR-DD858E only)	: 3 W
Temperature	
Operating	: 5°C to 40°C
Storage	: –20°C to 60°C
Operating position	: Horizontal only
Dimensions (WxHxD)	: 400 x 94 x 347 mm
Weight	: 3.8 kg
Format	: VHS PAL standard
Maximum recording time	
(SP)	: 240 min. with E-240 video cassette
(LP)	: 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	: PAL-type colour signal and CCIR monochrome signal,625 lines 50 fields
Recording system	: DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	: 45 dB
Horizontal resolution	: 250 lines
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	: 21-pin scart connectors : IN/OUT x 1, IN/DECODER x 1 RCA connectors: VIDEO IN x 1, AUDIO IN x 1, AUDIO OUT x 1

TUNER/TIMER

TV channel storage capacity	: 99 positions (+AUX position)
Tuning system	: Frequency synthesized tuner
Channel coverage	: VHF 47 – 89/104 – 300/ 302 – 470MHz UHF 470 – 862MHz
Aerial output	: UHF channels 22 – 69 (Adjustable)
Memory backup time	: Approx. 60 min.

ACCESSORIES

Provided accessories	: RF cable, Infrared remote control unit, "R6" battery x 2, Connector cover (for front panel connectors)

Specifications shown are for SP mode unless otherwise specified.
E.& O.E. Design and specifications subject to change without notice.

Auto Set Up – referring to the display panel

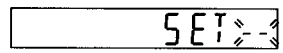
The Auto Set Up function sets the tuner channels, clock, Guide Program numbers and video channel* automatically.

* Useful for RF connection users.

BEFORE YOU START PLEASE MAKE SURE THAT:

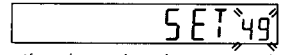
- The TV aerial cable is connected to the ANT.IN jack on the rear panel of the video recorder.
- The video recorder's mains power cord is connected to a mains outlet.
- The video recorder is turned off.
- Load batteries into the remote control.

1 Press ⏻/I (recorder/remote).



2 Press △▽ (remote) to select the international telephone country code.

(Ex.) DEUTSCHLAND is selected.



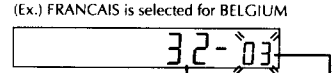
- If you have selected a country code other than 32 (BELGIUM) or 41 (SUISSE), go to step **3**.

International Telephone Country Code

SUISSE	: 41	SUOMI	: 358
ITALIA	: 39	PORTUGAL	: 351
ESPAÑA	: 34	DEUTSCHLAND	: 49
BELGIUM	: 32	NORGE	: 47
NEDERLAND	: 31	SVERIGE	: 46
GREECE	: 30	DANMARK	: 45
OTHERS	: --	ÖSTERREICH	: 43

- If you have selected 32 (BELGIUM) or 41 (SUISSE), press **OK** (remote) and select the language code by pressing △▽ (remote), then go to step **3**.

(Ex.) FRANCAIS is selected for BELGIUM

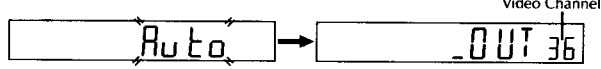


International Telephone Country Code — Language Code

Language Code

ENGLISH	: 01	NEDERLANDS	: 06
DEUTSCH	: 02	SVENSKA	: 07
FRANCAIS	: 03	NORSK	: 08
ITALIANO	: 04	SUOMI	: 09
CASTELLANO	: 05	DANSK	: 10

3 Press **OK** (remote). Do NOT press any button on the video recorder or remote control until the display panel shows as follows.



- If "– –:– –" appears on the display panel, see page 6 of the instructions.
- If you have connected the video recorder to your TV via RF connection, press **OK** to finish the Auto Set Up. To view picture signals from the video recorder, set your TV to the Video Channel.
- If you have connected the video recorder to your TV via AV connection, press **TV PROG** – until the display panel shows "_OUT– –" to set the Video Channel to off, then press **OK** to finish the Auto Set Up. To view picture signals from the video recorder, set your TV to its AV mode.

* *Once you have performed Auto Set Up, even if the recorder's memory backup has expired, the recorder will not perform Auto Set Up again. Perform tuner setting (☞ pg. 46), clock setting (☞ pg. 54) and/or Video Channel setting (☞ pg. 45) as required.*

FOR MORE INFORMATION SEE INSTRUCTIONS/P4

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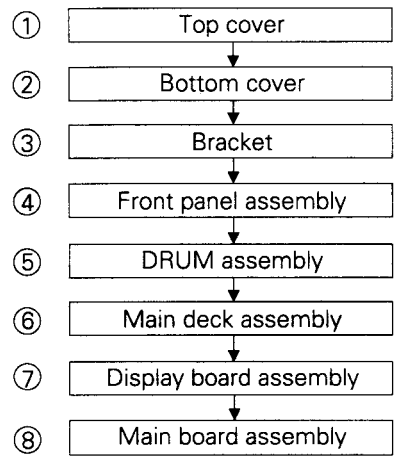
SECTION 1
DISASSEMBLY

1.1 DISASSEMBLY FLOW CHART

This flowchart lists the disassembling steps for the cabinet parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally laid.



1.2 HOW TO READ THE DISASSEMBLY AND ASSEMBLY

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	3(S1)	<NOTE 1>
②	BRACKET	D2	2(S2)	
③	FRONT PANEL ASSEMBLY	D3	7(L1)	<NOTE 2> <NOTE 3>
	(1)	(2)	(3)	(4) (5)

(1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) NO. of parts Figures.
(2) Part name to be removed or installed.
(3) Fig.No. showing procedure or part location
(4) Indentification of part to be removed,unhooked,unlocked, released,unpluged,unclamped or unsoldered. P = Spring, W = Washer, S = Screw, L = Locking tab, * = Unhook,unlock, release,unplug or unsolder.
(5) Adjustment information for installation

1.3 DISASSEMBLY/ASSEMBLY METHOD

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2)	
②	BOTTOM COVER	D2	(S3), 7(L1)	
③	BRACKET	D3	2(S4)	
④	FRONT PANEL ASSEMBLY	D4	7(L2),WR1 *CN3006*	<NOTE 1> <NOTE 2>
⑤	DRUM ASSEMBLY	D5	3(S5),CN1,WR2, WR3	<NOTE 2>
⑥	MAIN DECK ASSEMBLY	D6	2(S6),2(S7),WR4 2(L3),*CN4001	<NOTE 3>
⑦	DISPLAY BOARD ASSEMBLY	D7	7(L4), *CN7001, CN7191, REC SAFETY BOARD (L5)	<NOTE 4>
⑧	MAIN BOARD ASSEMBLY	D8	2(S8), (L6)	

<NOTE1>
- Before attaching the Front panel assembly, ensure that the door opener ⓐ is in the lowered position.

<NOTE2>
- When inserting the flat wire into the connector, be careful not to mistake the positioning of its electrodes.

<NOTE3>
- When it is required to remove the screws (S6) retaining the Main deck assembly, please refer to the "Procedures for Lowering the Cassette holder assembly"(See on pages 1-3).
- The Main deck assembly is also retained by two spacers on the Main board. Therefore, to remove the Main deck assembly, insert radio pliers or a similar tool from the main deck side and pinch the two hooks of the spacers while removing.
- When attaching the Main deck assembly, be careful not to damage the sensors and switches on the Main board (D3001: LED, Q3001: Start sensor, Q3002: End sensor).

<NOTE4>
- The REC safety board assembly is attached to the Display board assembly. It is therefore necessary to remove the REC safety board assembly before removing the Display board assembly.
- When inserting the flat wire into the connector, be careful not to mistake the positioning of its electrodes.

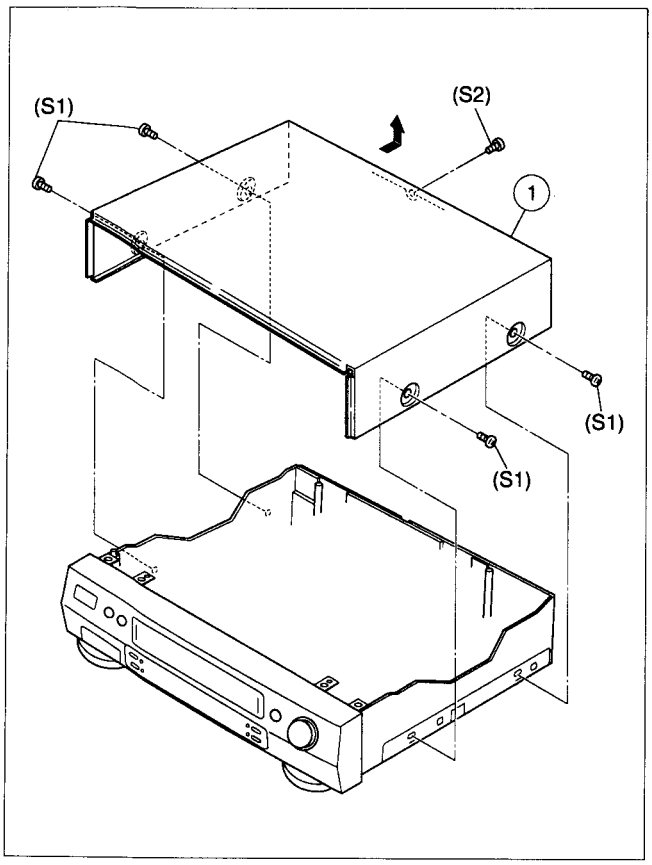


Fig. D1

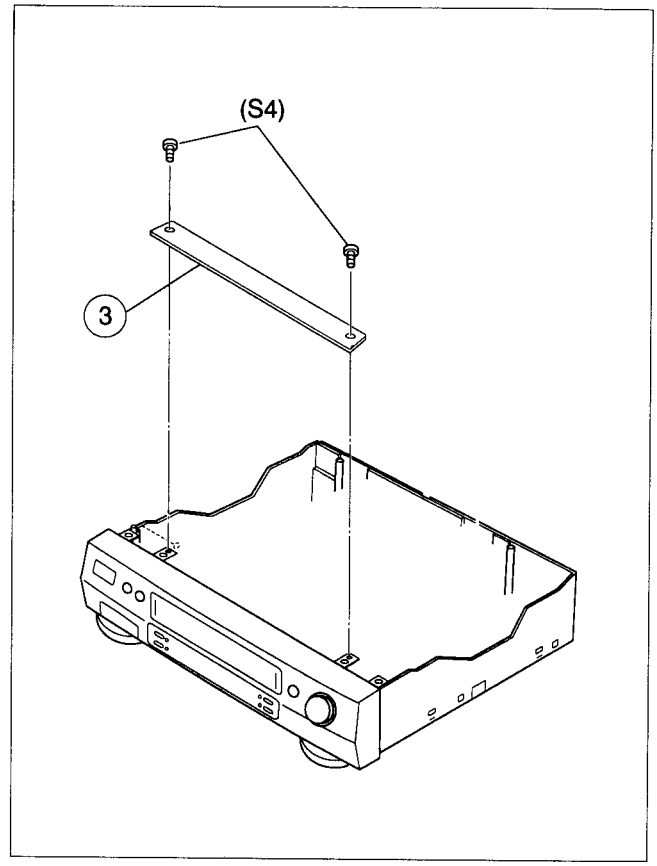


Fig. D3

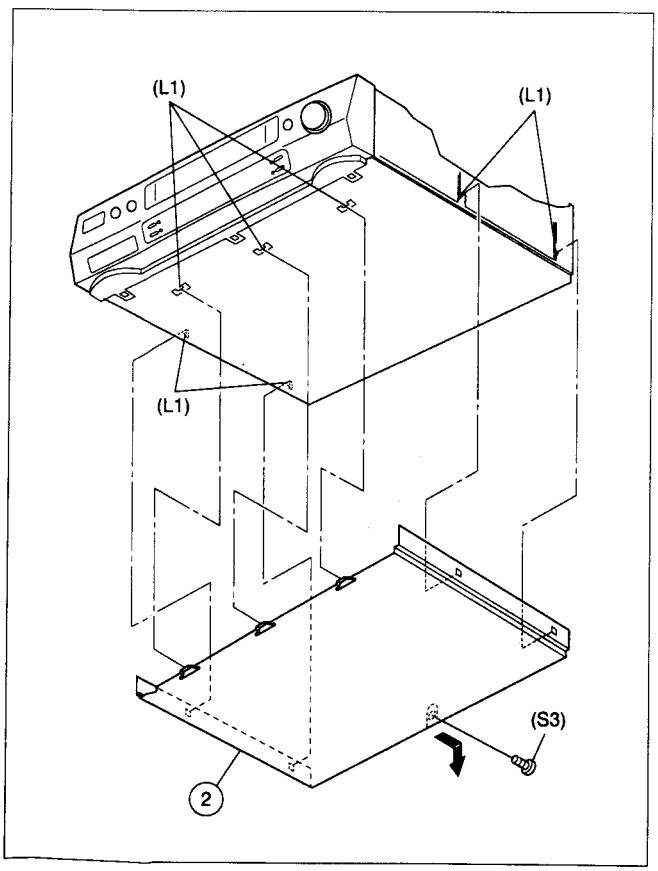


Fig. D2

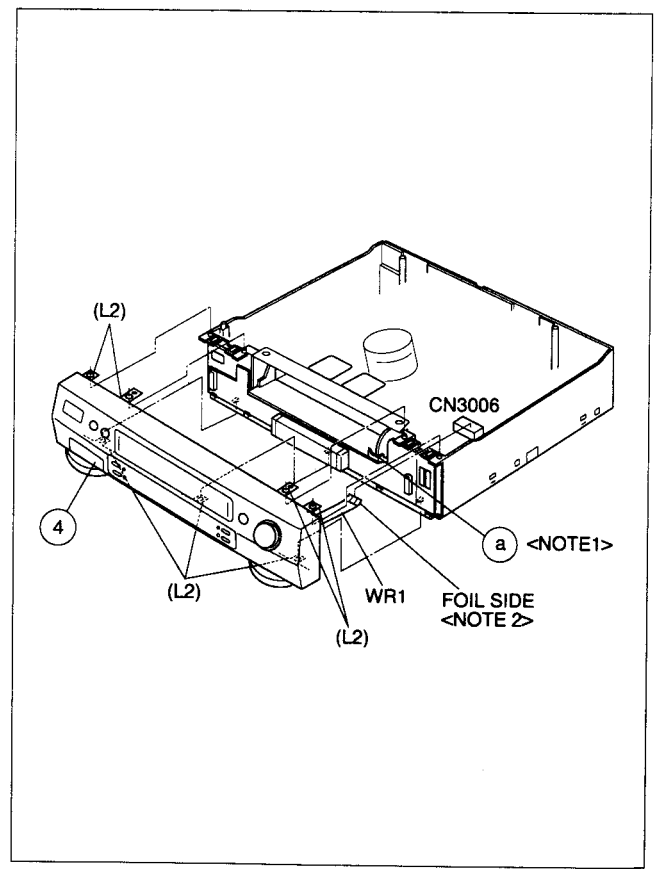


Fig. D4

NOTE : When installing the DRUM assembly, secure the screws(S5) in the order of A, B, C.

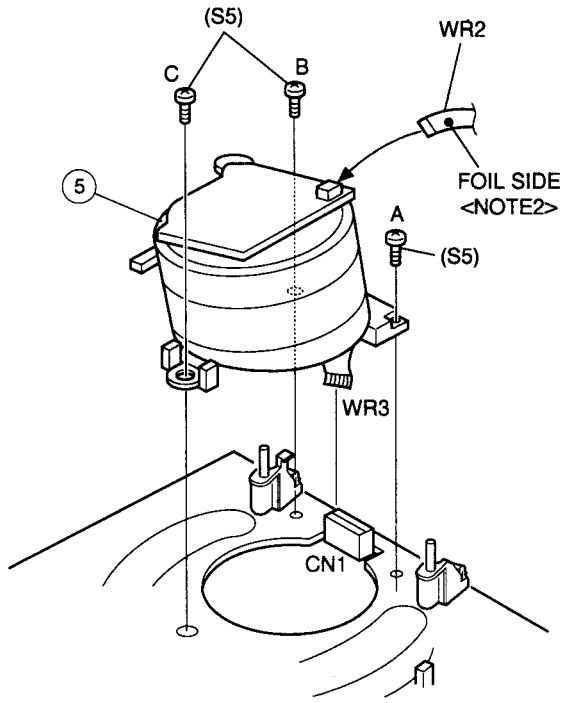


Fig. D5

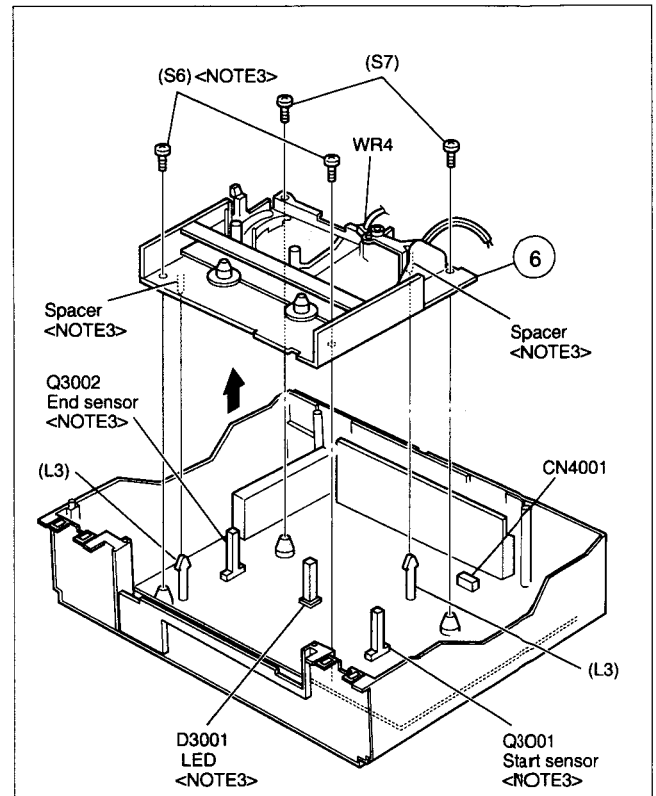


Fig. D6

Procedures for Lowering the Cassette holder assembly

As the mechanism of this unit is integrated with the Housing assembly, the holder must be lowered and the two bolts unscrewed when removing the Main deck assembly.

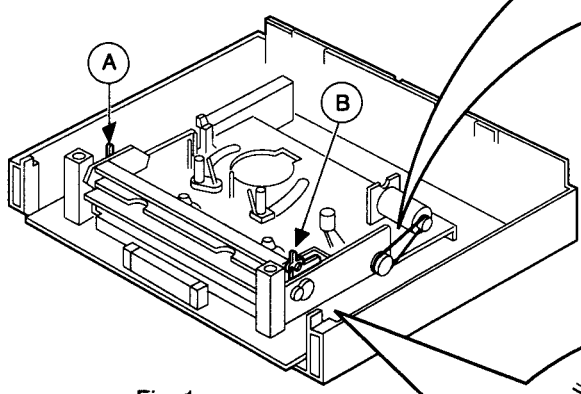


Fig. 1

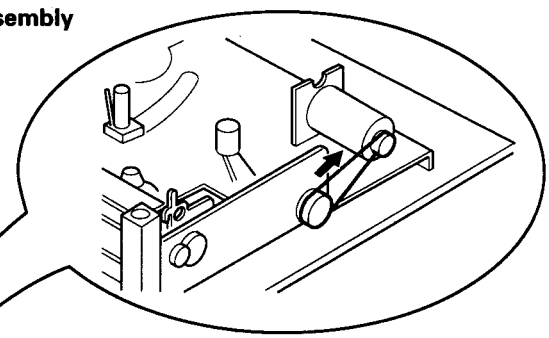


Fig. 2

Turn the loading motor pulley in the direction as indicated by Fig.2. As both Ⓐ and Ⓑ levers are lodged twice, push the levers in the direction as indicated by Fig.3 to release them. When pushing the levers, do it in the order of Ⓐ, Ⓑ, Ⓑ, Ⓐ. When the holder has been lowered, turn the pulley until the cassette holder is securely in place without allowing any up/down movement.

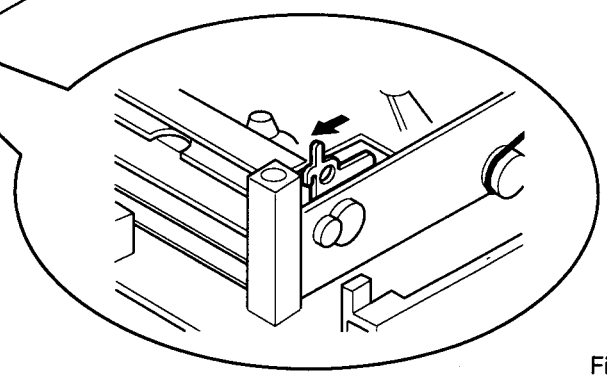


Fig. 3

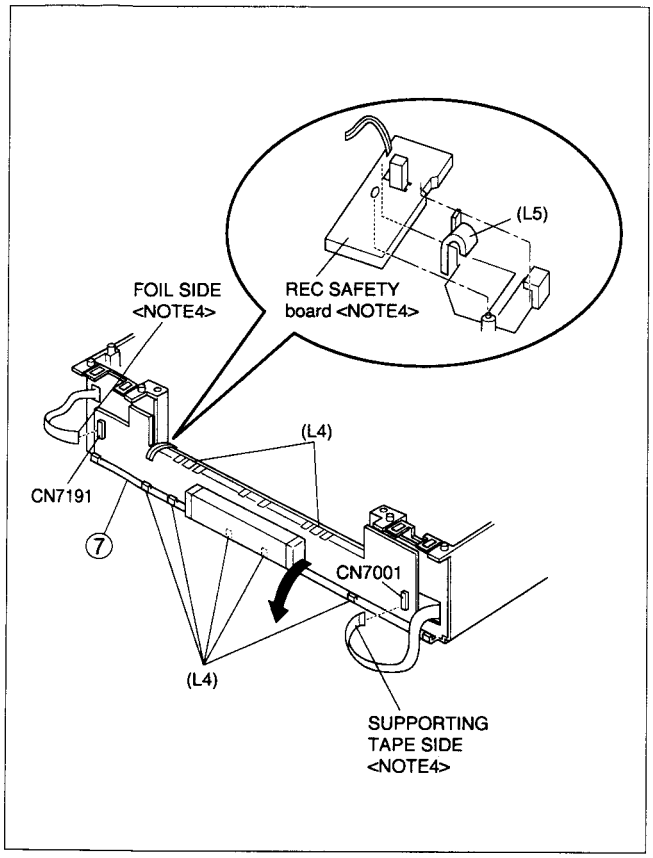


Fig. D7

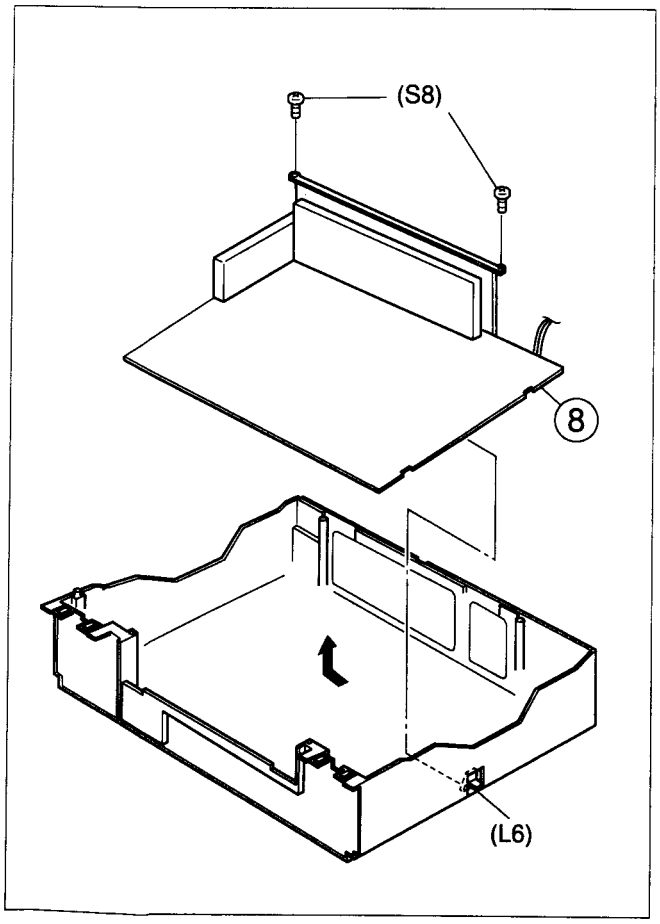


Fig. D8

1.4 SERVICE POSITION

In order to facilitate diagnosis and the repair of the Main deck assembly, this unit is constructed so as to allow the Main deck and the Main board assemblies to be removed together from the Chassis assembly.

1.4.1 How to take out the Mechanism and Main board assemblies

(1) Remove the Top cover, Bracket and Front panel assembly. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD. Take care not to pull the drum wire (Fig.D5) from CN1).
(2) Lower the cassette holder, and make the preparations required in order to remove the screws from the Main deck assembly (Refer to the "Procedures for Lowering the Cassette holder assembly" on pages 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD).
(3) Take out 2 screws Ⓐ and 2 screws Ⓑ as shown in Fig. 1-4-1.
(4) Remove the flat wires from CN7162 and CN3005 on the Main board assembly.

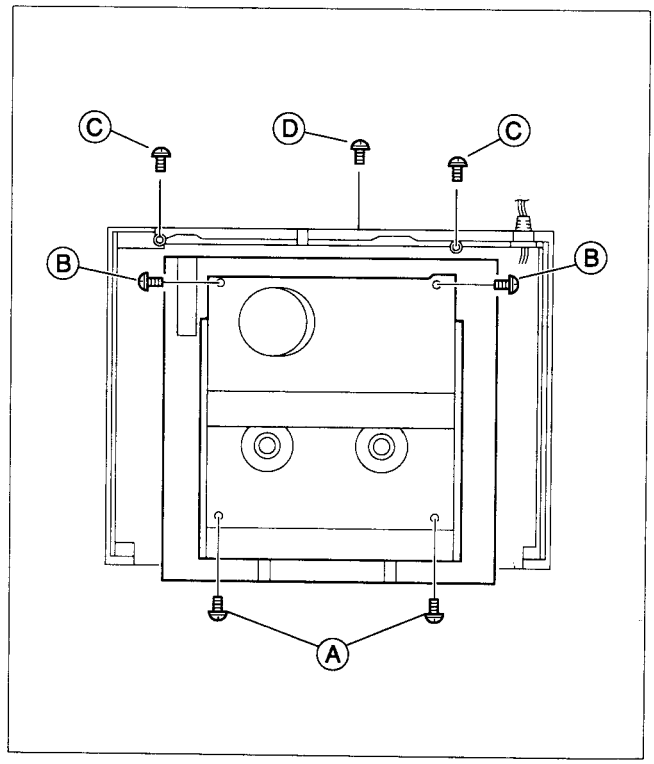


Fig. 1-4-1

(5) Take out 2 screws Ⓒ and take out 1 screw Ⓓ to install the Bottom cover (See Fig. 1-4-1).
(6) Remove the hook Ⓔ while holding the edge of the Main board, and remove the Main board and Main deck assemblies together. At this stage be careful of the power cord and prongs of the jacks on the back side (See Fig. 1-4-2).
(7) Remove the Display board assembly and the REC safety board (See 1.3 DISASSEMBLY/ASSEMBLY METHOD), then place them on the front side of the Main deck assembly and the Main board assembly which have been disassembled by procedure (6), and insert the flat wires into CN7162 and CN3005 of the Main board (see Fig.1-4-3).

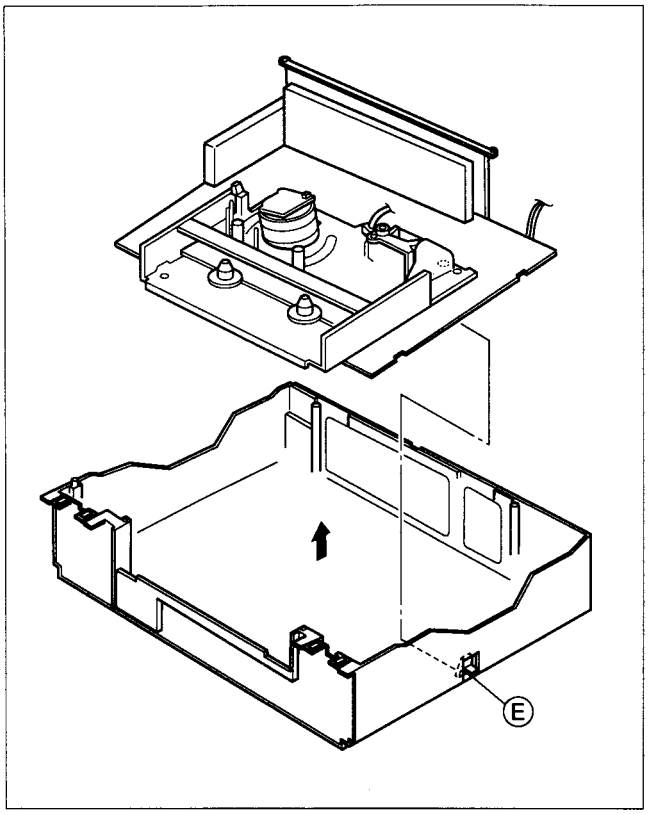


Fig. 1-4-2

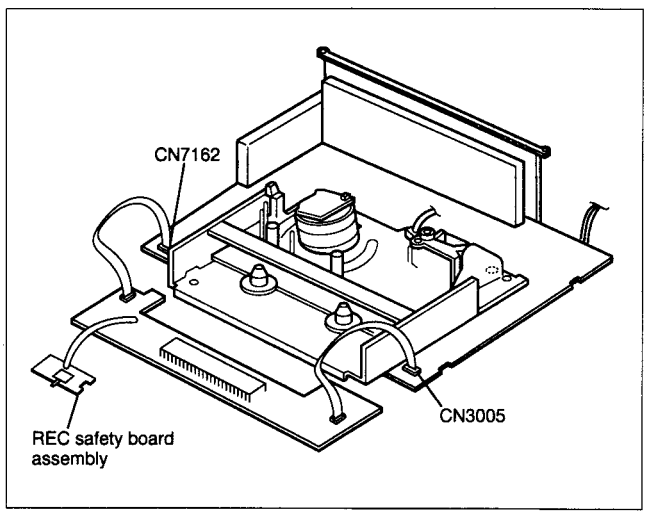


Fig. 1-4-3

(8) Plug the power cord into an AC outlet, and lift the cassette holder.
(Before turning on the power make sure that there is nothing which may produce a short circuit, such as faulty soldering.)

1.4.2 Precautions for cassette loading in the "SERVICE POSITION"

The REC safety board assembly detects cassette loading as well as cassette tabs. Therefore, after the assembly has been removed in the "SERVICE POSITION", it is required to set the switch manually on the REC safety board assembly when a cassette is loaded.

1.4.3 Cassette loading and ejection methods in the "SERVICE POSITION"(See Fig. 1-4-3).

(1) Insert a cassette halfway in the Cassette holder assembly.
(2) Set the switch on the REC safety board assembly to ON (by pressing the switch).
(3) As soon as the cassette starts to be loaded, set the switch on the REC safety board assembly to OFF (by releasing the switch).
(4) Now the desired operation (recording, playback, fast forward, rewind, etc.) is possible in this status (the status shown in Fig.1-4-3).

NOTES: • *When performing diagnostics of the tape playback or the recording condition in the "SERVICE POSITION", enter the desired mode before turning the set upside down, and do not change the mode when performing diagnostics while the set is placed upside down. If you want to switch the mode, turn the set to the normal position (the status shown in Fig.1-4-3).*

• *In the "SERVICE POSITION", the cassette tabs cannot be detected and recording becomes possible even with a cassette with broken tabs such as the alignment tape. Be very careful not to erase important tapes.*

(5) The switch on the REC safety board assembly does not have to be operated when ejecting a tape. But be sure to turn the set to the normal position before ejecting the tape.

1.5 MECHANISM SERVICE MODE

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the "MECHANISM SERVICE MODE".

1.5.1 How to set the "MECHANISM SERVICE MODE"

(1) Unplug the power cord from an AC outlet.
(2) Connect TPGND and TP7001 (TEST) on the Display board assembly using a jumper wire.
(3) Plug the power cord into an AC outlet.
(4) Set the power switch to ON.
(5) With lock levers ⒶⒷ on the left and right sides of the Cassette holder assembly are pulled toward the front, slide the holder in the same direction as the cassette insertion direction. (For the positions of lock levers ⒶⒷ, refer to the "Procedures for Lowering the Cassette holder assembly" on pages 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
(6) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.

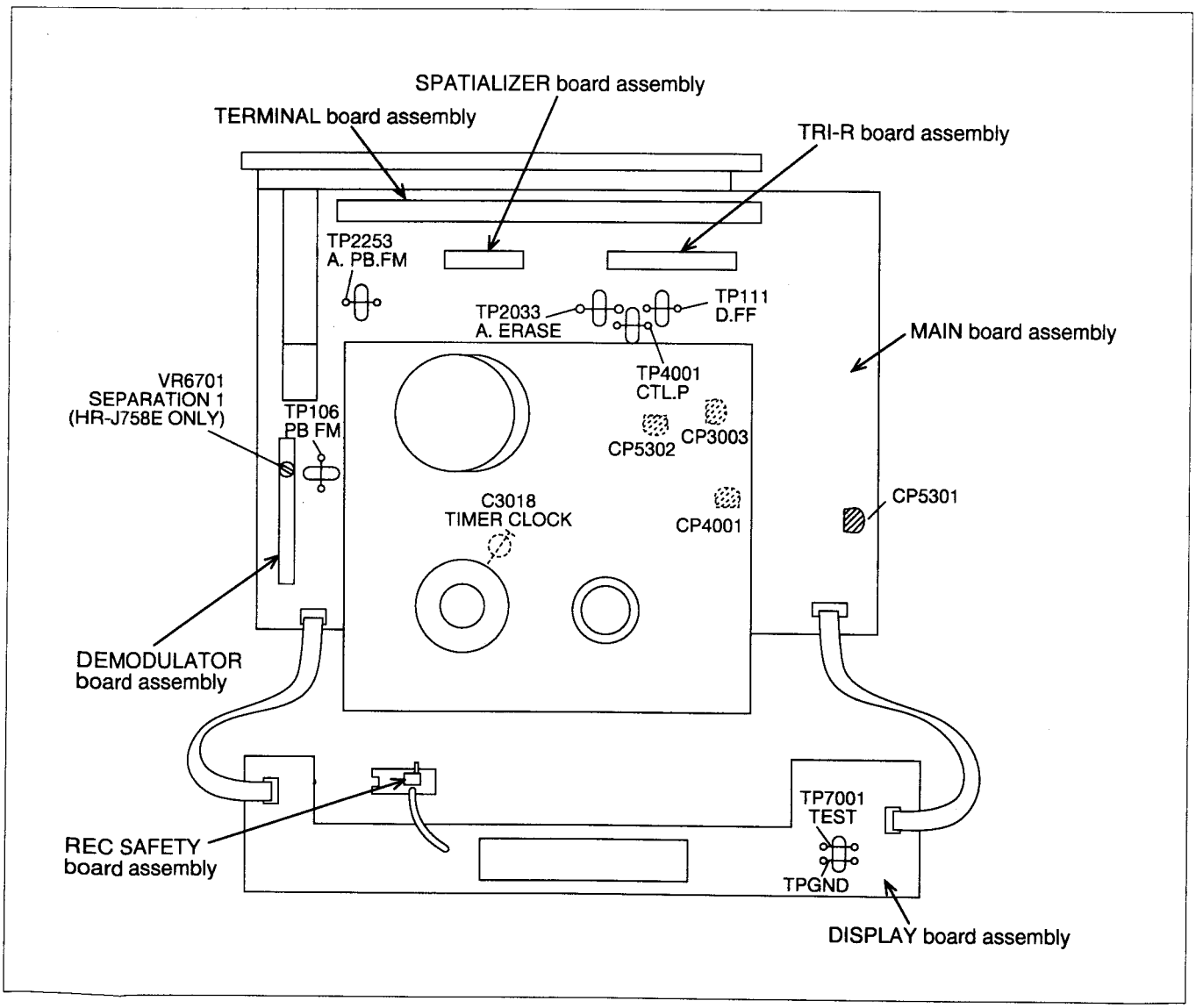


Fig. 1-5-1

1.6 EMERGENCY DISPLAY FUNCTION

This product has the function to store the last two previous emergency faults which can be displayed in the FDP when servicing.

1.6.1 How to display record of an emergency faults

Note: *Put the unit into A mode by using the VCR remote control. (When it is in B mode, the preset remote control codes are not accepted.)*

(1) Press "N" button of the presetting unit more than 2 seconds and the two previous emergency faults are shown in the LED or FDP.
(2) Press "N" button of the presetting unit again to return to the normal mode.

[Example] E : 01 : 03

Emergency fault before last
Emergency fault of the last time

[Example] E : — — : — — ← No record of emergency

1.6.2 Detail of emergency faults

EMG DATA	Symptom	Detect mode	Resulting mode
E : 01	Loading motor rotates for more than 8 Sec without shift to next mode.	Loading	POWER OFF
E : 02	Loading motor rotates for more than 8 Sec without shift to next mode.	Unloading	POWER OFF
E : 03	TU REEL FG input is absent. (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	STOP → POWER OFF
E : 04	DRUM FF input is absent. (for more than 3 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	STOP → POWER OFF
E : 06	CAPSTAN FG input is absent. (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	STOP → POWER OFF
E : 07	No SWD5V/12V	POWER ON	POWER OFF

Table 1-6-1 EMERGENCY FAULTS

1.6.3 How to clear emergency record

Press the COUNTER RESET button on the remote controller in the emergency record display mode, and the record of the emergency fault(s) is cleared.

SECTION 2
MECHANISM ADJUSTMENT

2.1 BEFORE STARTING REPAIR AND ADJUSTMENT

2.1.1 Precautions

(1) Unplug the power cable of the main unit before using your soldering iron.
(2) Take care not to cause any damage to the conductor wires when plugging and unplugging the connectors.
(3) Do not randomly handle the parts without identifying where the trouble is.
(4) Exercise enough care not to hurt yourself, especially your finger nails, during the repair work.
(5) When installing the front panel assembly, be sure to hook the lug on the back side of cassette door to the door opener of the cassette holder. If this operation is neglected it will not be possible to remove the cassette when ejecting because the housing door cannot be opened.

2.1.2 Checking for Proper Mechanical Operations

Enter the mechanism service mode when you want to operate the mechanism when no cassette is loaded. (See 1.5 MECHANISM SERVICE MODE)

2.1.3 Manually Removing the Cassette Tape

1. In case of electrical failures

If you cannot remove the cassette tape which is loaded because of any electrical failure, manually remove it by taking the following steps.

(1) Unplug the power cable and remove the top cover, bracket and front panel assembly. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD)
(2) Unload the cassette by manually turning the unloading motor of the main deck assembly toward the front. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig.2-1-1)
(3) Bring the pole base assembly (on the supply or take-up side) to a pause when it reaches the position where it is hidden behind the cassette tape.
(4) Move the top plate toward the drum while holding down the lug Ⓐ of the bracket retaining the top plate. Likewise hold part Ⓑ down and remove the top plate. The spring plate Ⓒ is then brought under the cassette lid. Then remove the top plate by pressing the whole cassette tape down. (Note 1) (See Fig.2-1-2).
(5) Remove the cassette tape by holding both the slackened tape and the cassette lid.
(6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

Note: *The spring plate of the top plate is sharp-edged. Take care not to hurt yourself.*

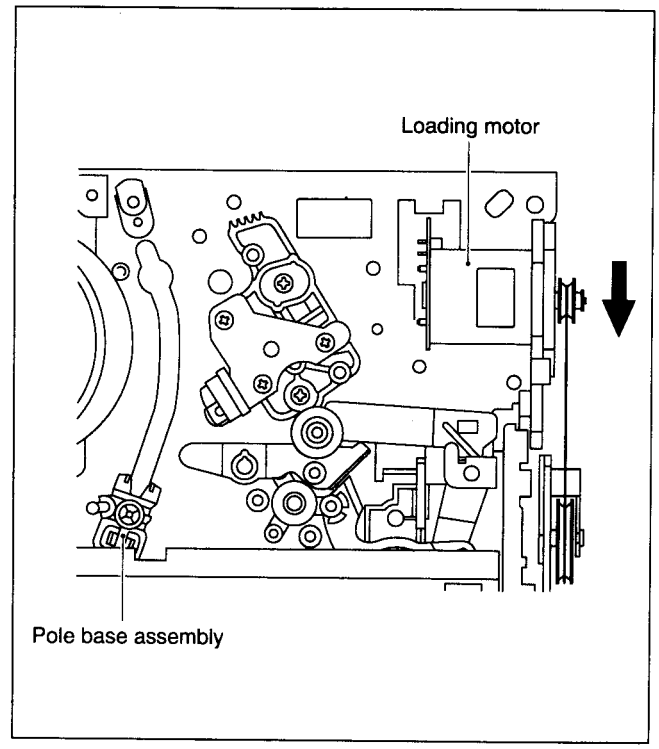


Fig. 2-1-1

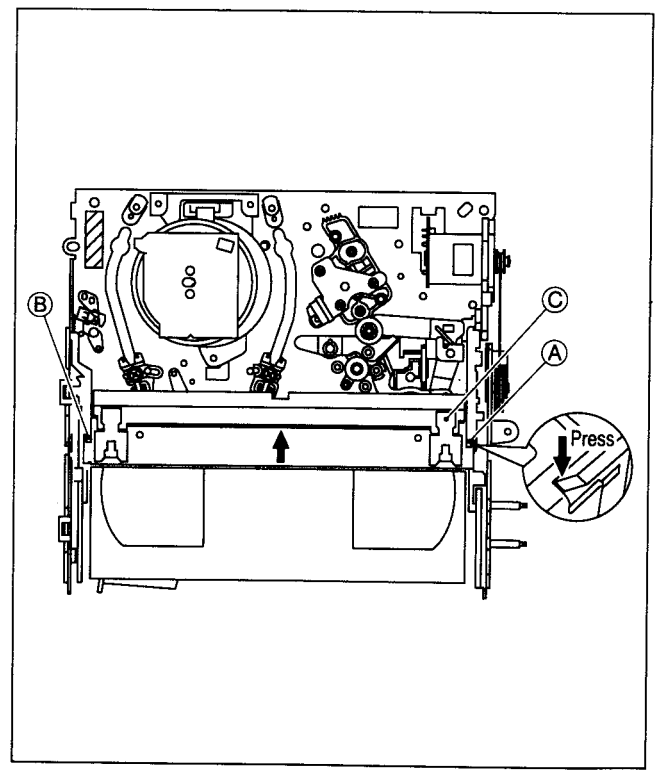


Fig. 2-1-2

2. In case of mechanical failure

If you cannot remove the cassette tape which is loaded because of any mechanical failure, manually remove it by taking the following steps.

(1) Unplug the power cable and remove the top cover, bracket and front panel assembly (See 1.3 DISASSEMBLY/ASSEMBLY METHOD).

(2) While keeping the tension arm of the main deck assembly free from tension, pull the tape on the pole base assembly out of the guide roller (on the supply or take-up side) (See Fig.2-1-3).

(3) Remove the top plate as done in Step (4) of "1 In case of electrical failures" and remove the guide pole cap at the same time. (See Fig.2-1-4).

(4) While lifting the cassette tape lid, hold the cassette tape case and pinch roller by the fingers and move them toward the loading motor to relieve pressure on the tape. Then remove the tape while taking the cassette case out of the cassette holder. (See Fig.2-1-4).

(5) Re-place the guide pole cap and take up the slack of the tape into the cassette.

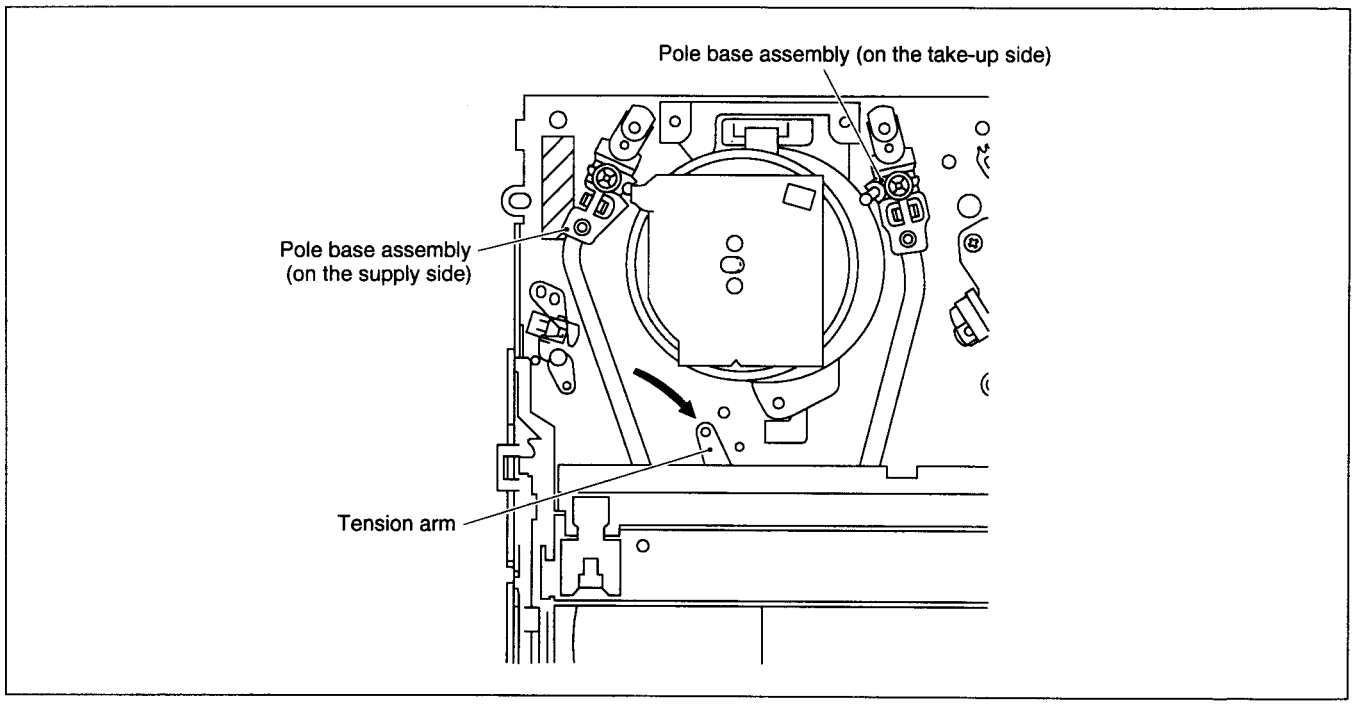


Fig. 2-1-3

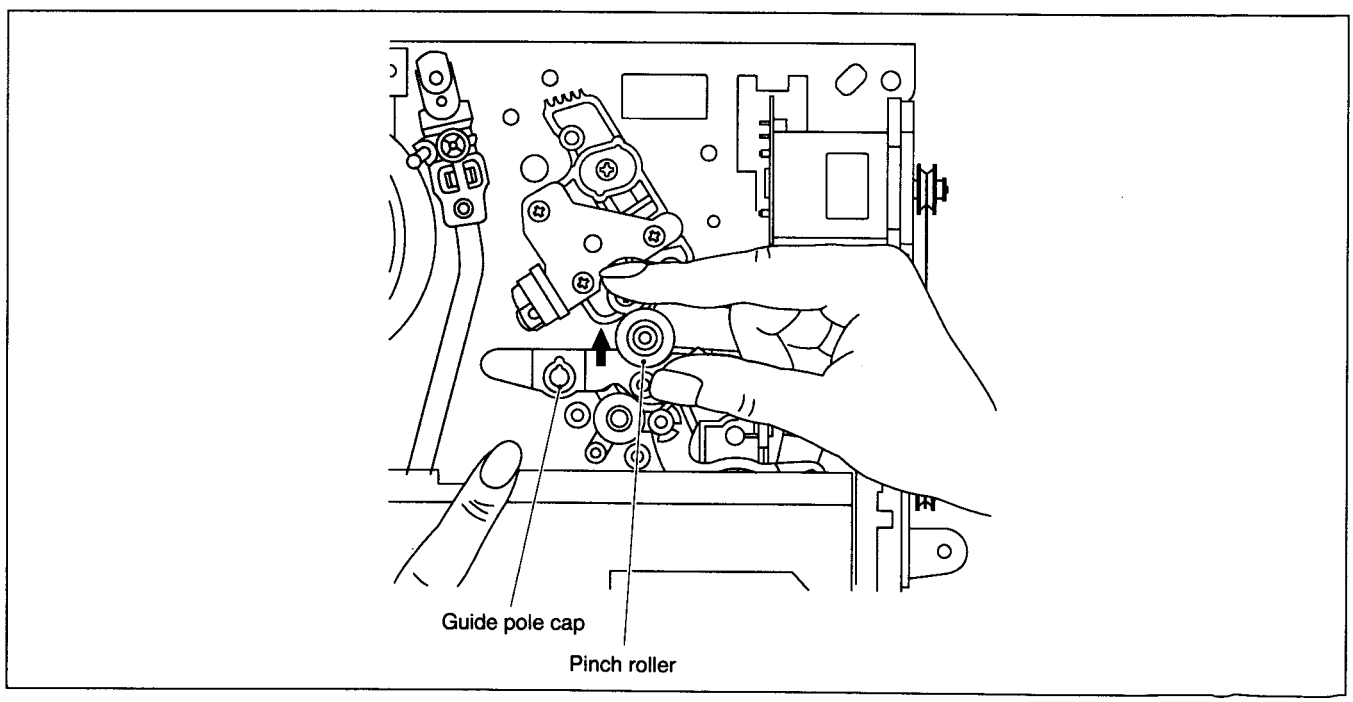


Fig. 2-1-4

2.1.4 Jigs and Tools Required for Adjustment

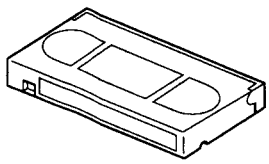
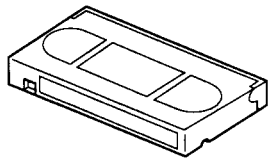
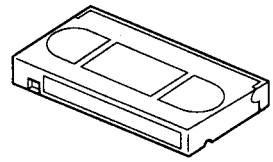
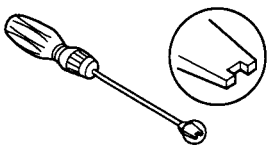
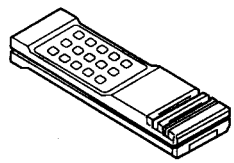
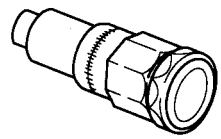
Alignment tape (SP) MHPE	Alignment tape (LP) MHPE-L	Back tension cassette gauge PUJ48076-2	A/C head position bit PTU94010
			
Roller driver PTU94002	Presetting unit PTU94008	Torque gauge PUJ48075-2	
			

Table 2-1-1 Jigs and tools required for adjustment

2.1.5 Maintenance and Inspection

1. Location of major mechanical parts

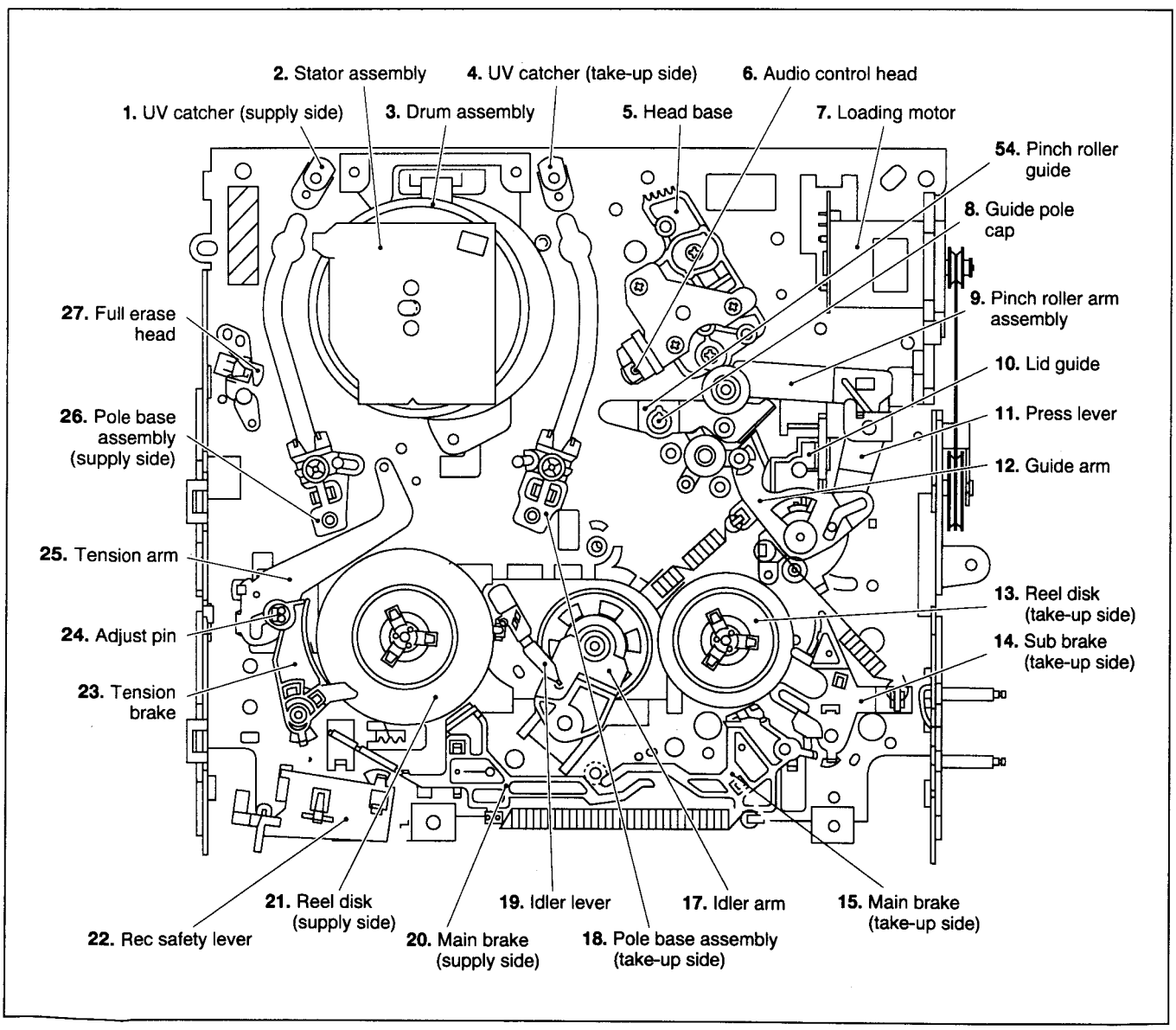

2. Stator assembly
4. UV catcher (take-up side)
6. Audio control head
1. UV catcher (supply side)
3. Drum assembly
5. Head base
7. Loading motor
54. Pinch roller guide
8. Guide pole cap
9. Pinch roller arm assembly
10. Lid guide
11. Press lever
12. Guide arm
13. Reel disk (take-up side)
14. Sub brake (take-up side)
15. Main brake (take-up side)
17. Idler arm
18. Pole base assembly (take-up side)
19. Idler lever
20. Main brake (supply side)
21. Reel disk (supply side)
22. Rec safety lever
23. Tension brake
24. Adjust pin
25. Tension arm
26. Pole base assembly (supply side)
27. Full erase head

Fig. 2-1-5 Main deck top side

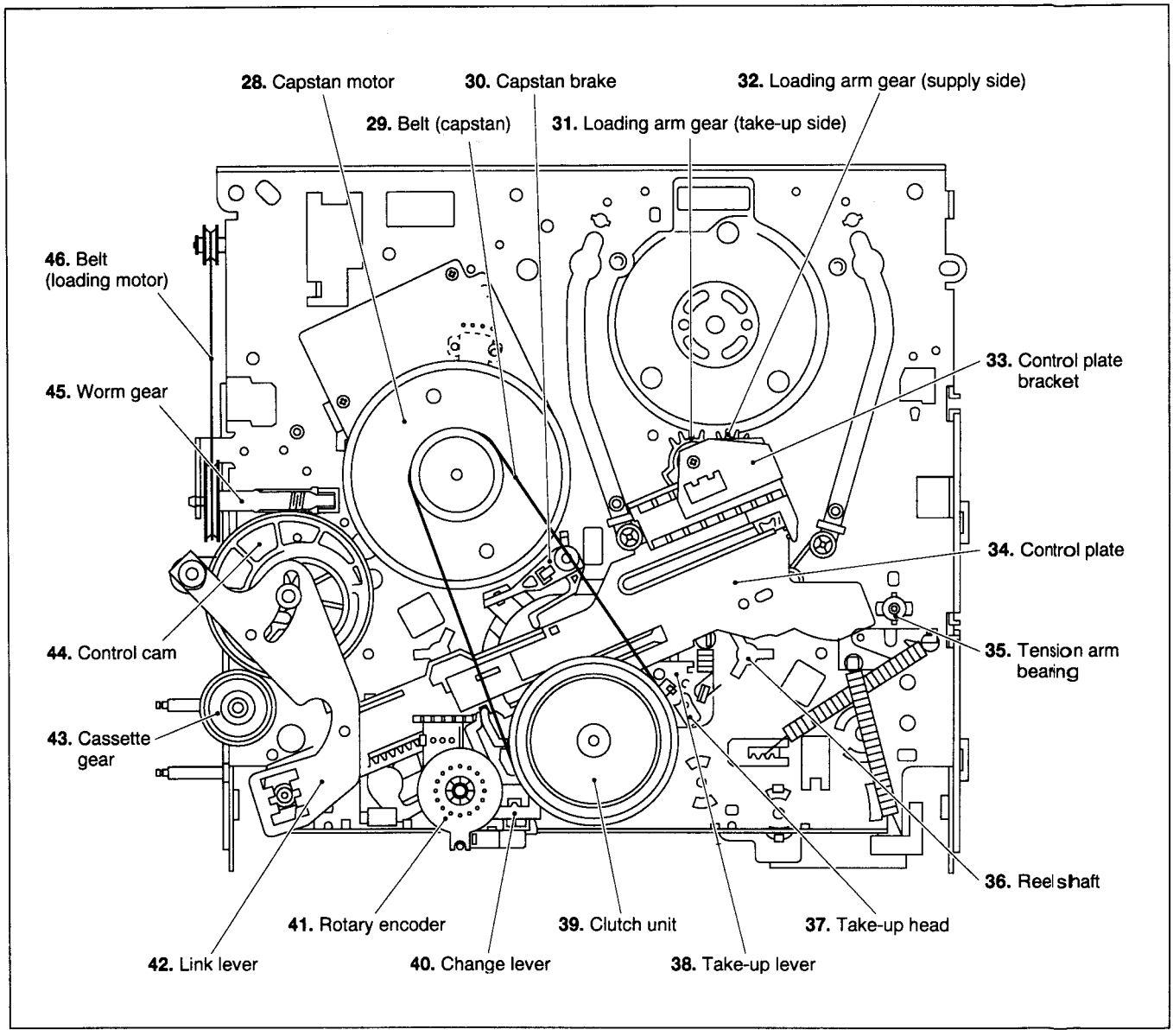


Fig. 2-1-6 Main deck bottom side

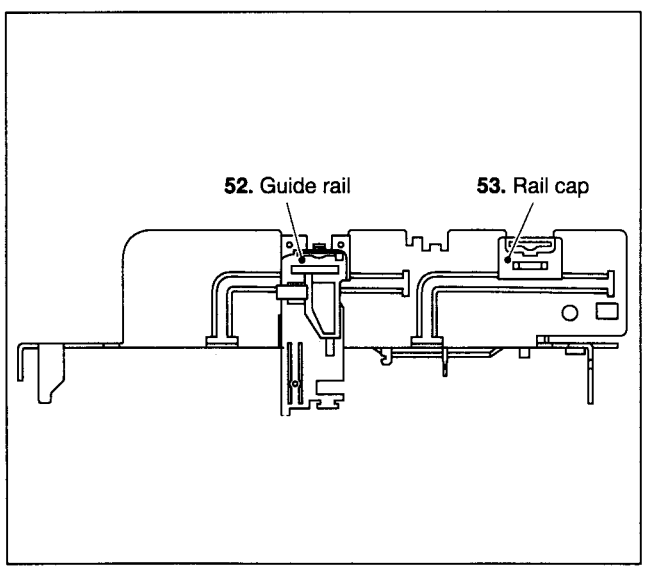


Fig. 2-1-7 Main deck left side

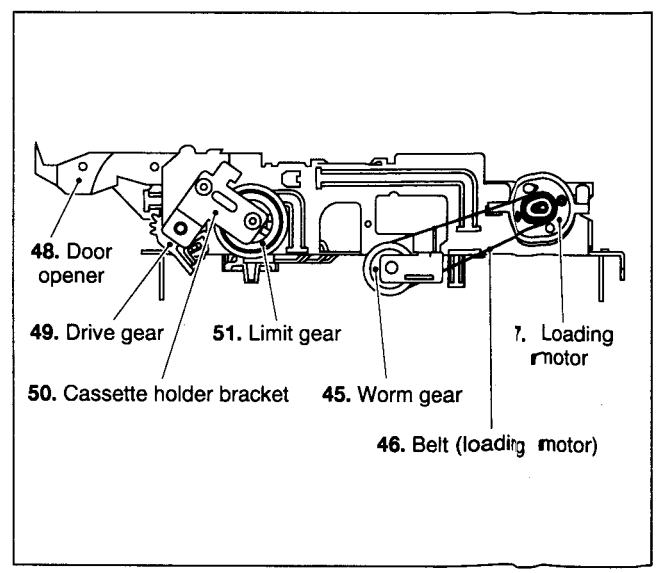


Fig. 2-1-8 Main deck right side

Note: *Numerals at the start of the parts names are identical with those of the location diagrams of the major mechanical parts, 1 - 18 of which denote the order of removal. Of the alphabets T and B next to the parts names, T denotes removal from the main deck top side, B from the bottom side and T/B from both sides.*

	Removable parts names / Replacement parts names		1,4	12	53	46	9	52	11	50	–	–	–	49	32	–	–	38	25	23	31	21	42	41	29	39	40	33	34	14	19	54
			UV catcher	Guide arm assembly	Rail cap	Belt (loading motor)	Pinch roller arm assembly	Guide rail	Press lever assembly	Cassette Holder bracket	Opener guide	Relay gear	Cassette holder assembly	Drive gear	Loading arm gear (supply side)	Drive arm assembly	Tension spring	Take-up lever	Tension arm assembly	Tension brake assembly	Loading arm gear (take-up side)	Reel base (supply side)	Link lever	Rotary encoder	Belt (capstan motor)	Clutch unit	Change lever	Control plate bracket	Control plate	Sub brake	Idler lever	Pinch roller guide
17	Idler arm	T			1			2		3	4	5	6	7		8				9		10	11	12	13	14	15	16	17		18	
15	Main brake (take-up side)	T/B			1			2		3	4	5	6	7		8							9	10	11	12	13	14	15	16		
13	Reel disk (take-up side)	T			1			2		3	4	5	6	7		8							9	10	11	12	13	14	15	16		
19	Idler lever	T/B			1			2		3	4	5	6	7		8				9		10	11	12	13	14	15	16	17			
–	Rotary encoder guide	T/B			1			2		3	4	5	6	7		8							9	10	11	12	13	14	15	16		
14	Sub brake (take-up side)	T/B			1			2		3	4	5	6	7		8							9	10	11	12	13	14	15			
–	Loading arm gear shaft	B													8						9		1	2	3	4	5	6	7			
35	Tension arm bearing	T			1			2		3	4	5	6				8		9	7												
–	Control plate guide	T/B																8					1	2	3	4	5	6	7			
37	Take-up head	B																8					1	2	3	4	5	6	7			
31	Loading arm gear (take-up side)	B													8								1	2	3	4	5	6	7			
25	Tension arm assembly	T/B			1			2		3	4	5	6				8			7												
20	Main brake (supply side)	T/B			1			2		3	4	5	6	7		8																
38	Take-up lever	T/B																					1	2	3	4	5	6	7			
32	Loading arm gear (supply side)	B																					1	2	3	4	5	6	7			
21	Reel disk (supply side)	T			1			2		3	4	5	6	7																		
–	Drive arm assembly	T			1			2		3	4	5	6	7																		
30	Capstan brake	T/B																					1	2	3	4	5	6	7			
34	Control plate	B																					1	2	3	4	5	6				
23	Tension brake assembly	T/B			1			2		3	4	5	6																			
–	Cassette holder assembly	T			1			2		3	4	5																				
–	Direct gear	B																						1	2	3	4					
10	Lid guide	T		1			2		3																							
40	Change lever	B																						1	2	3						
49	Drive gear	T								1	2	3																				
11	Press lever assembly	T		1			2																									
–	Relay gear	T								1	2																					
51	Limit gear assembly	T								1	2																					
26	Pole base assembly (supply side)	T/B	1																													
18	Pole base assembly (take-up side)	T/B	1																													
–	Tension spring (Main brake)	T																														
22	Rec safety lever	T/B																														
28	Capstan motor	T/B																							1							2
45	Worm gear	B				1																										
44	Control cam	B																					1									
43	Cassette gear	B																					1									
39	Clutch unit	B																							1							
9	Pinch roller arm assembly	T		1																												
–	Opener guide	T								1																						
8	Guide pole cap	T																														
54	Pinch roller guide	T																														
1,4	UV catcher	T																														
42	Link lever	B																														
41	Rotary encoder	B																														
12	Guide arm assembly	T																														
50	Cassette holder bracket	T																														
52	Guide rail	T																														
53	Rail cap	T																														
7	Loading motor assembly	T																														
5	A/C head assembly	T																														

2. Cleaning

Regular cleaning of the transport system parts is desirable but practically impossible. So make it a rule to carry out cleaning of the tape transport system whenever the machine is serviced.

When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

(1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth or Kimu-wipe with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.

Note: ***Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.***

(2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.

(3) After cleaning, make sure that the cleaned parts are completely dry before using the video tape.

3. Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

(1) See the mechanism assembly and disassembly diagrams (M4) for the lubricating or greasing spots. See Table 2-1-2 for the types of oil or grease to be used.

Type	Name	Serial No.	Symbols on the disassembly diagrams
Grease	Maltemp SH-P	KYODO-SH-P	AA
Oil	Cosmohydro HV56	COSMO-HV56	BB

Table 2-1-2 Grease and oil used for the unit

4. Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning,lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions.However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time,even if the set is not used.

System	Parts Name	Operation Hours	
		~1000H	~2000H
Tape transport	Upper drum assembly	★○	○
	A/C head	★○	★○
	Lower drum assembly	★	★○
	Pinch roller arm assembly	★	★
	Full erase head	★	★
	Tension arm assembly	★	★
	Capstan motor (Shaft)	★	★
	Guide arm assembly	★	★
Drive	Capstan motor		○
	Capstan brake		○
	Main brake		○
	Belt (Capstan)	○	○
	Belt (Loading motor)		○
	Loading motor		○
	Clutch unit		○
	Worm gear assembly		○
	Control plate		○
Other	Brush assembly	★○	★○
	Tension brake	○	○
	Rotary encoder		○

★: Cleaning

○: Inspection or Replacement if necessary

Table 2-1-3

2.2 REPLACEMENT OF MAJOR PARTS

2.2.1 Before Starting Disassembling

This unit is provided with a mechanism assembly mode. It is therefore necessary to enter this mode for assembling and disassembling procedures.
This mode is usually not in use, manually set it when it is required.

2.2.2 How to Set the Mechanism Assembling Mode

Remove the main deck assembly and place it bottom side up. (See SECTION 1 DISASSEMBLY). Turn the worm gear toward the front so that the register hole of the control cam is brought into alignment with the hole at the main deck assembly chassis. This position renders the mechanism assembling mode operational. Make sure that the control plate is located in alignment with the mark E. (See Fig.2-2-1)

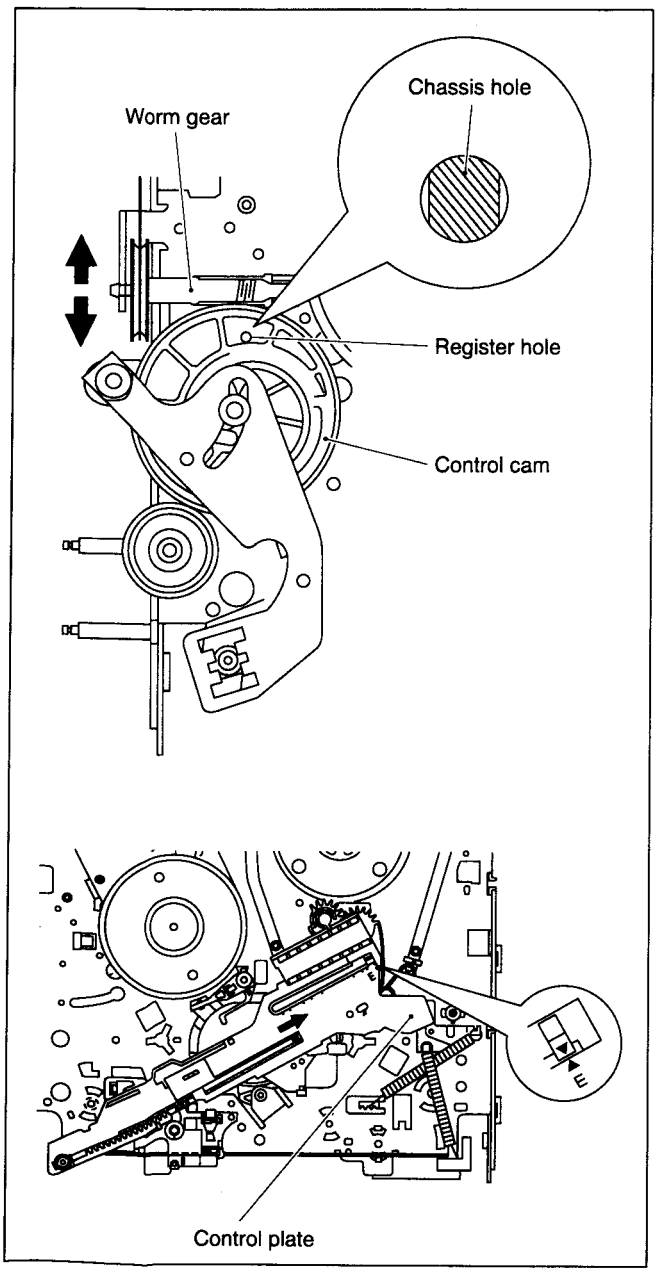


Fig. 2-2-1

2.2.3 Cassette Holder Assembly

1. How to remove

(1) Remove the guide rail and rail cap. (See Fig.2-2-2).
(2 lugs on the guide rail and one lug on the rail cap)

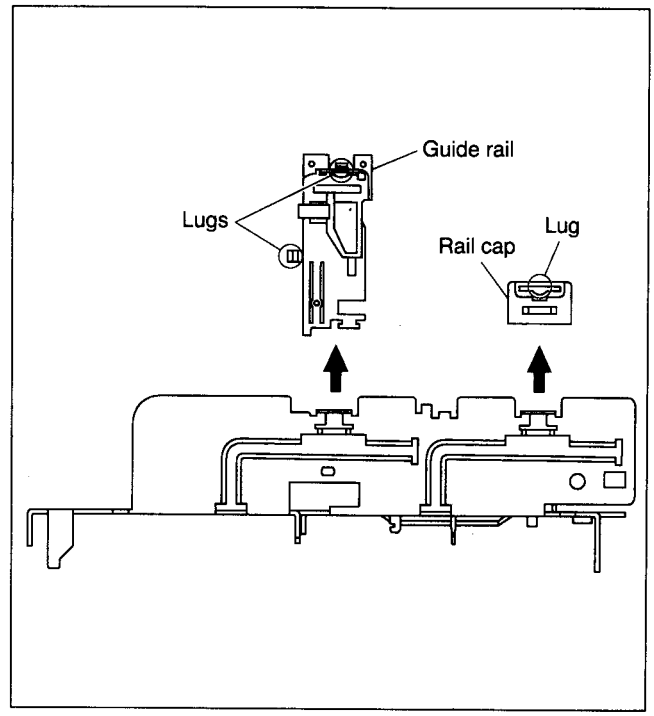


Fig. 2-2-2

(2) Remove the two slit washers and remove the cassette holder bracket. (See Fig.2-2-3)
(3) Remove the opener guide, relay gear and limit gear. (See Fig.2-2-3)

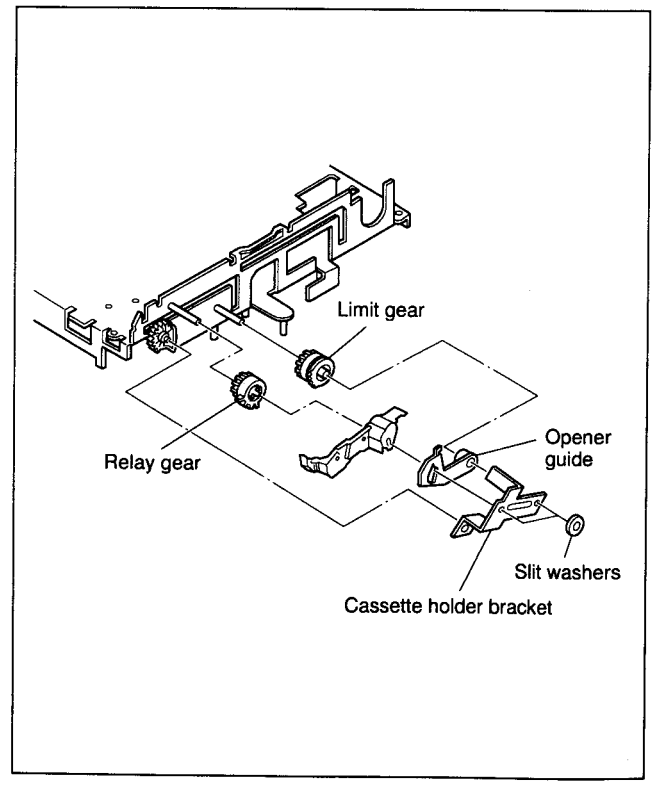


Fig. 2-2-3

(4) While swinging the lock levers (R) and (L) of the cassette holder assembly toward the front, slide the cassette holder assembly until its legs come to where the guide rail and the rail cap have been removed (so that the drive arm is upright). (See Fig.2-2-4)

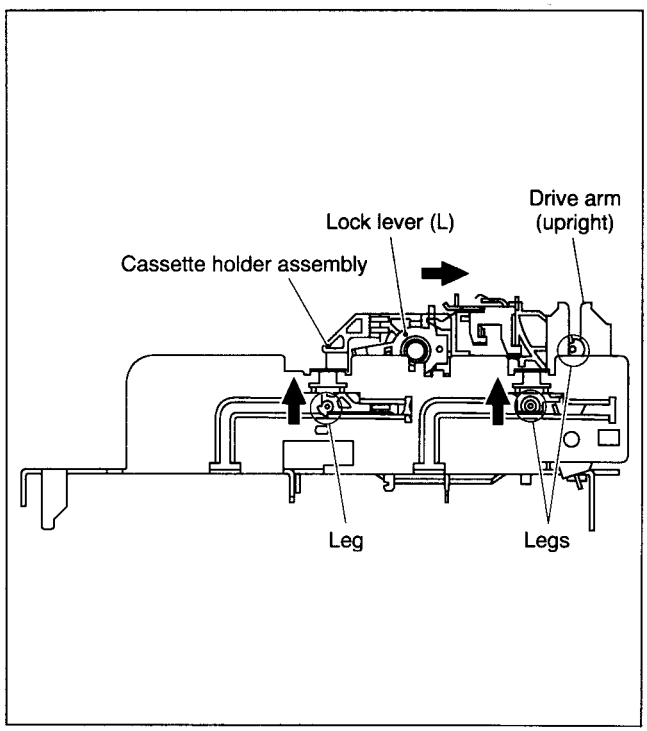


Fig. 2-2-4

(5) While holding the left side of the cassette holder, lift the cassette holder assembly so that the three legs on the left side are all released. Then pull the legs Ⓐ and Ⓑ on the right side out of the rail and also pull up the leg Ⓒ. (See Fig.2-2-5, Fig.2-2-6)

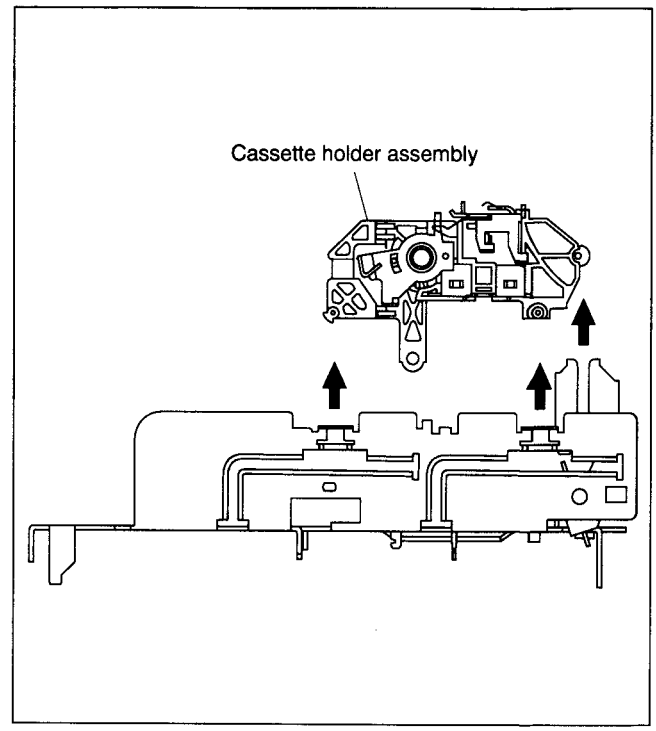


Fig. 2-2-5

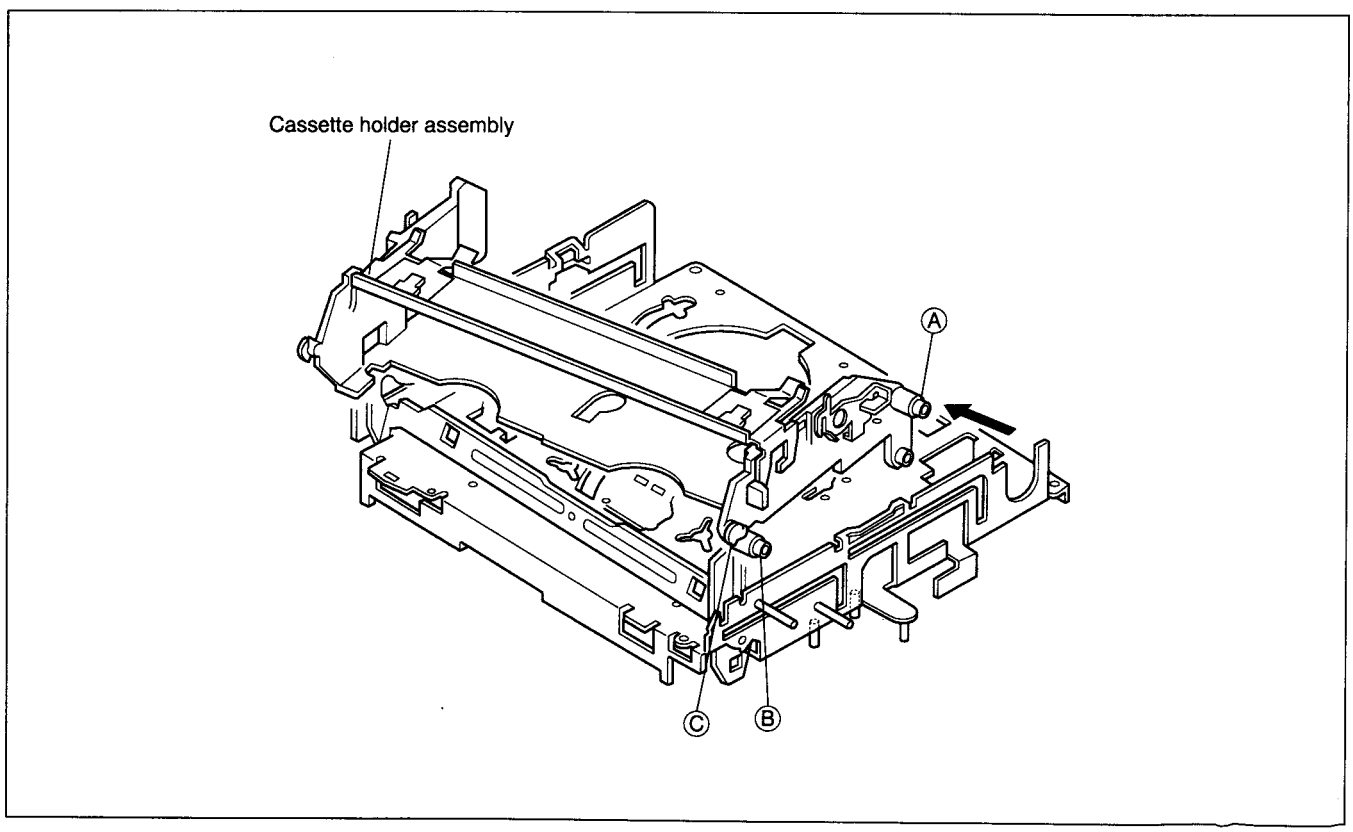


Fig. 2-2-6

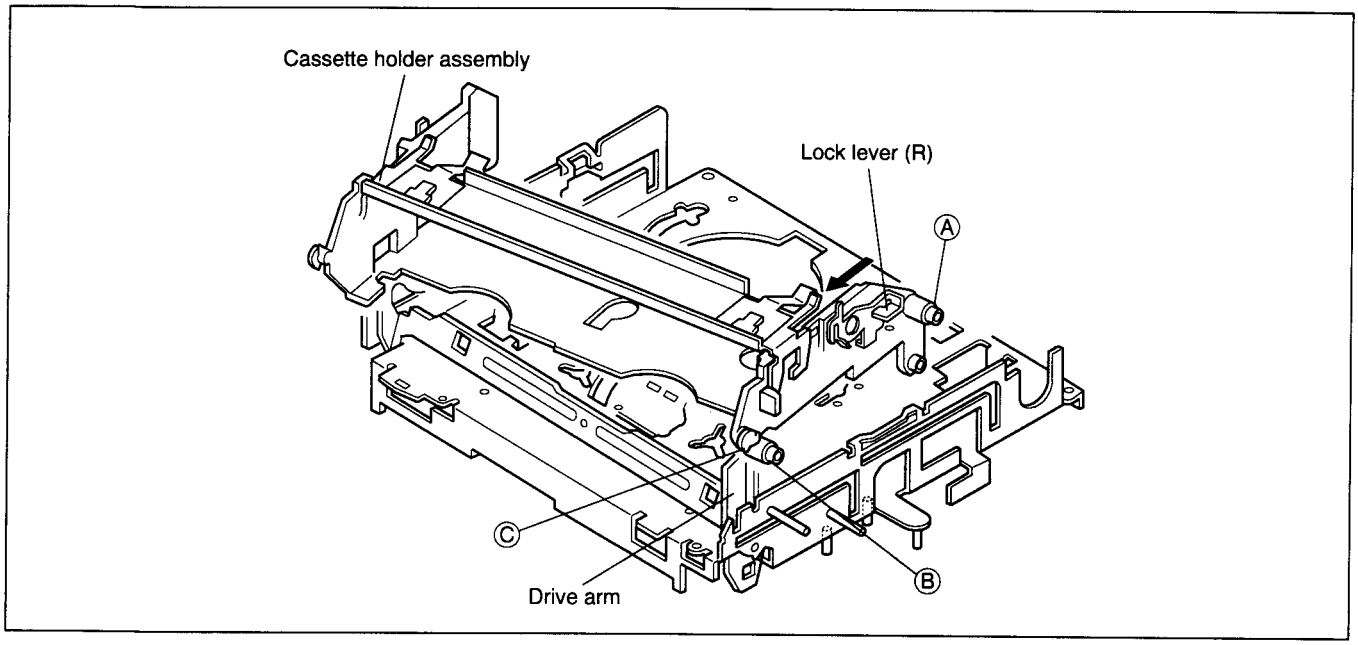


Fig. 2-2-7

2. How to install

(1) Hold the drive arm upright and fit the leg Ⓒ on the right side of the cassette holder assembly into the groove. (See Fig.2-2-7)

(2) While swinging the lock lever (R) of the cassette holder assembly toward front, put the legs Ⓐ and Ⓑ into the rail. (See Fig.2-2-7)

(3) Drop the three legs on the left side of the cassette holder into the groove at one time. (See Fig.2-2-8)

(4) Slide the whole cassette holder toward the front to bring it to the eject end position.

(5) Install the limit gear so that the notch on the outer circumference of the limit gear is brought into alignment with the register hole on the main deck. (See Fig.2-2-9)

(6) Install the relay gear so that the notch on the outer circumference of the relay gear is brought into alignment with the notch on the main deck. It is important at this stage that the register hole at the limit gear, the register hole at the relay gear and the register hole at the drive gear are all in alignment. (See Fig.2-2-9).

(7) Install the door stopper, opener guide and cassette holder bracket and fasten the two slit washers.

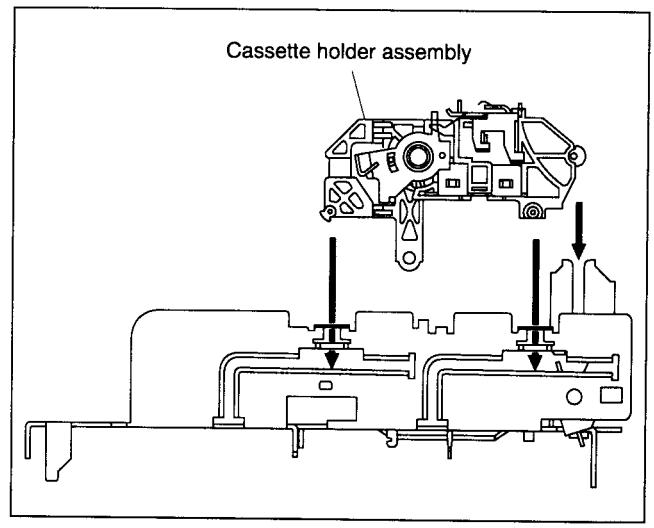


Fig. 2-2-8

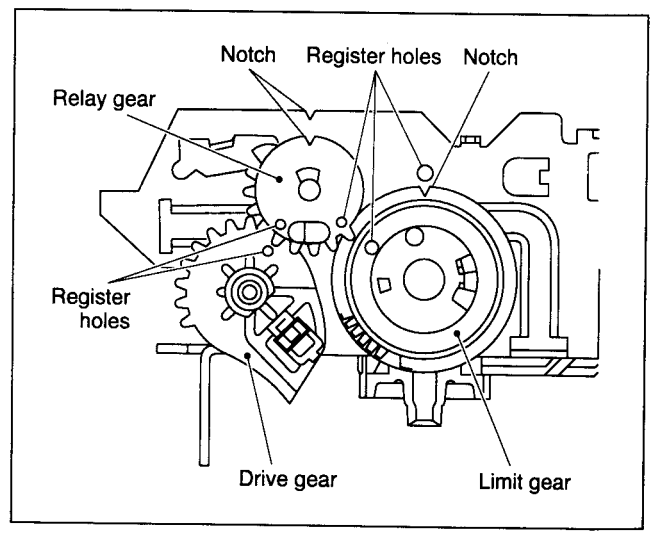


Fig. 2-2-9

2.2.4 Pinch Roller Arm Assembly

1. How to remove

(1) Remove the spring from the hook of the press lever.
(2) Remove the slit washer and remove the pinch roller seat. (See Fig.2-2-10)
(3) Remove the pinch roller arm assembly by pulling it up.

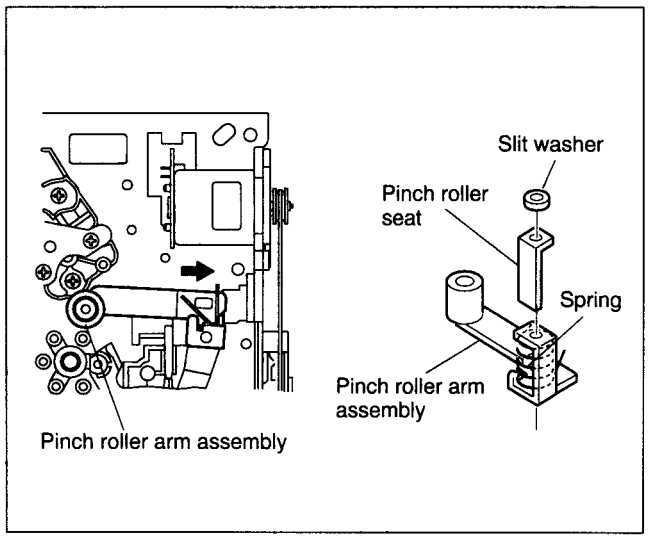


Fig. 2-2-10

2.2.5 Guide Arm and Press Lever

1. How to remove

(1) Remove the spring and expand the lug of the lid guide in the arrow-indicated direction. Then remove the guide arm by pulling it up.
(2) Remove the press lever by pulling it up. (See Fig.2-2-11)

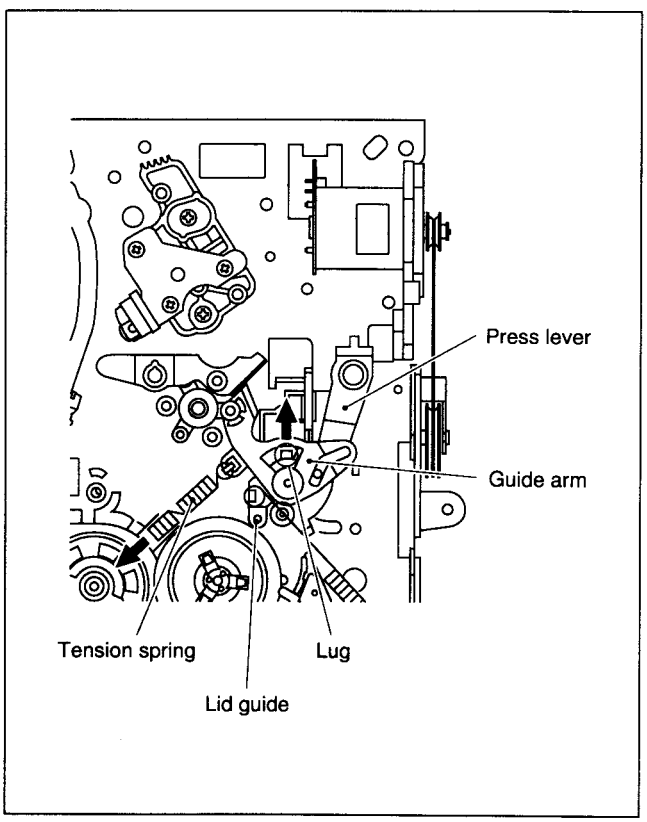


Fig. 2-2-11

2.2.6 Audio Control Head

1. How to remove

(1) Remove two screws (A) and remove the audio control head together with the head base.

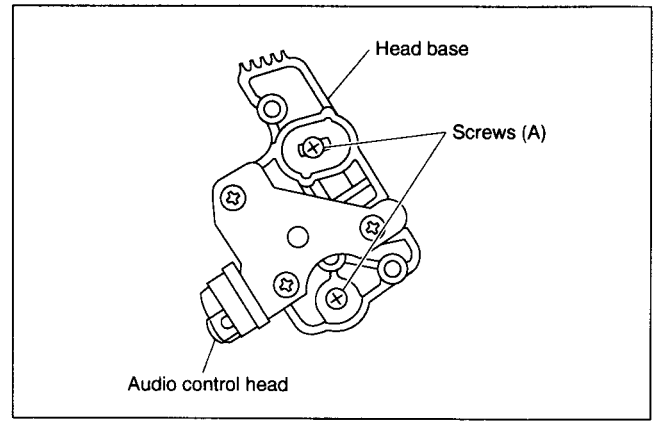


Fig. 2-2-12

(2) When replacing only the audio control head, remove the three screws (B) while controlling the compression spring.

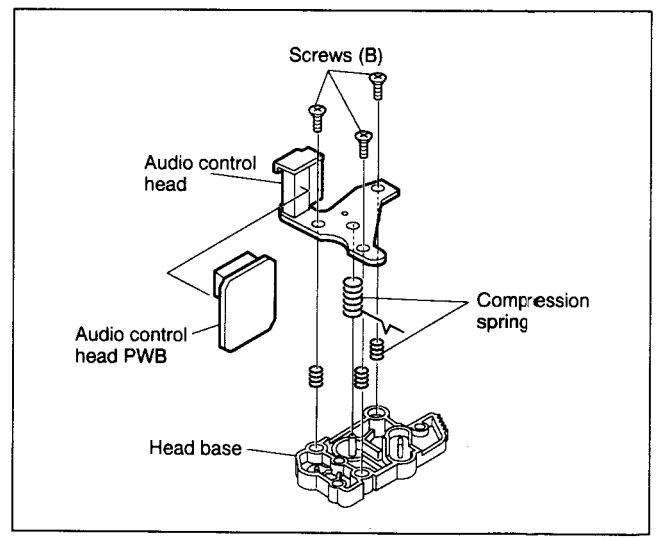


Fig. 2-2-13

2. How to install

(1) To make the post-installation adjustment easier, set the temporary level as indicated in Fig.2-2-14. Also make sure that the screw center is brought into alignment with the center position of the slot.

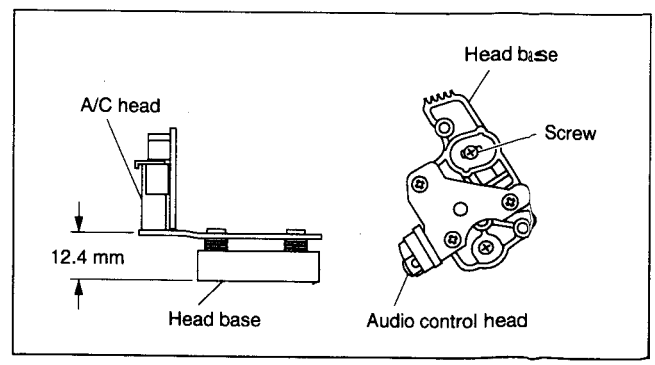


Fig. 2-2-14

2.2.7 Loading Motor

1. How to remove

(1) Remove the belt wound around the worm gear.
(2) Open the two lugs of the motor guide and remove the loading motor, loading motor PWB and motor guide altogether by pulling them up.
(3) When replacing the motor base, take care with the orientation of the motor (so that the label faces upward).
(4) When the motor pulley has been replaced, choose the fitting dimension as indicated in Fig.2-2-15.

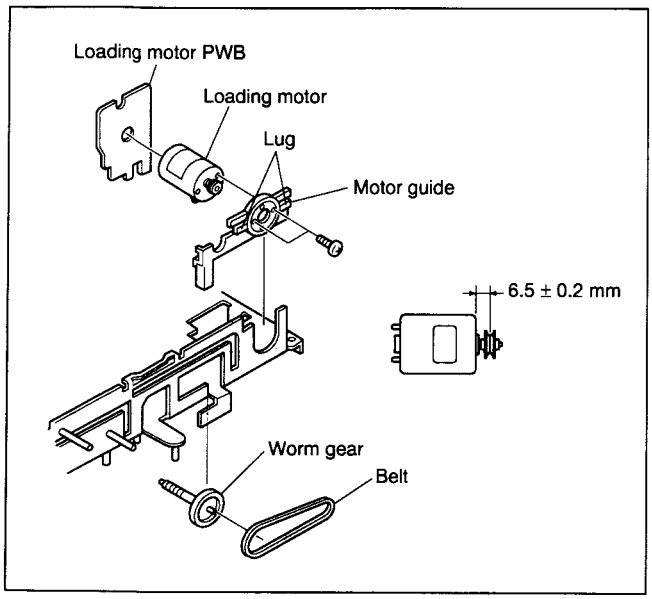


Fig. 2-2-15

2.2.8 Capstan Motor

1. How to remove

(1) Remove the belt (capstan) on the main deck back side.
(2) Remove one screw (A) and remove the pinch roller guide.
(3) Remove two screws (B) and remove the capstan motor.

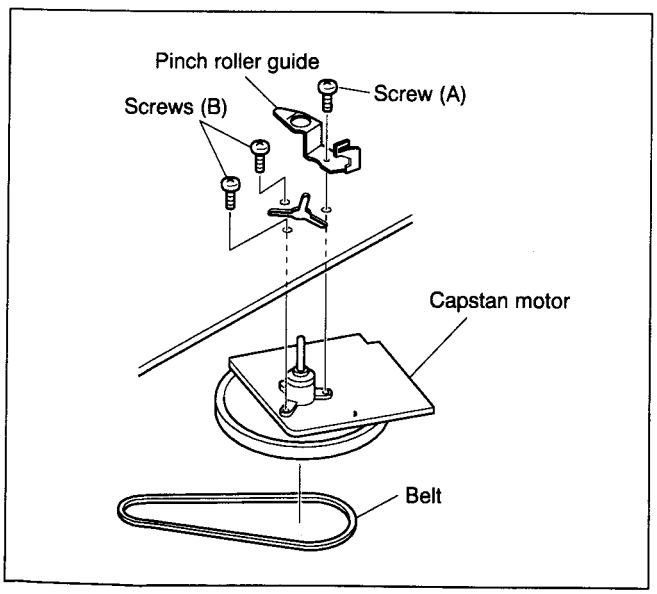


Fig. 2-2-16

2. How to install

Please refer to page 2-25.

2.2.9 Pole Base (on the supply or take-up side)

1. How to remove

(1) Remove the UV catcher on the removal side by loosening one screw (A).
(2) Remove the pole base on the supply side from the main deck by loosening one screw (B) on the main deck back side and sliding the pole base toward the UV catcher.
(3) As for the pole base on the take-up side, turn the pulley of the loading motor to lower the cassette holder because the screw (B) is hidden under the control plate (See the "Procedures for Lowering the Cassette holder assembly" on page 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD). Further turn the motor pulley to move the cassette holder until the screw (B) is no longer under the control plate (in the half-loading position). Then remove it as done for the supply side by removing one screw (B).

NOTE: ***After reinstalling the Pole base and the UV catcher, be sure to perform compatibility adjustment.***

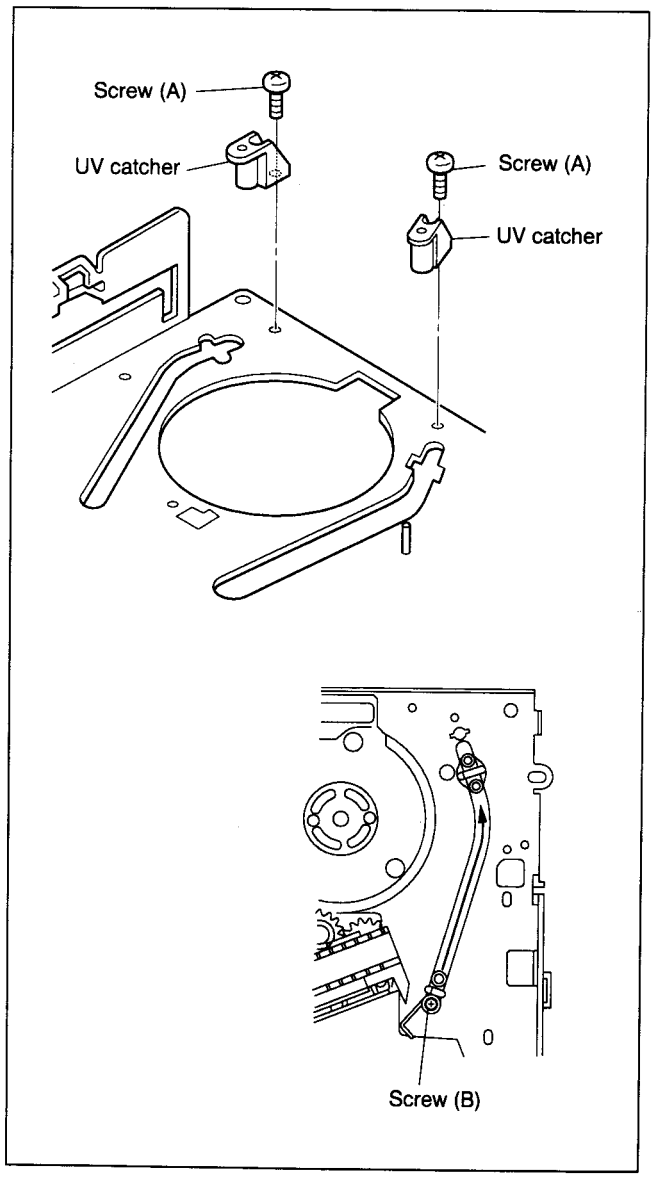


Fig. 2-2-17

2.2.10 Rotary Encoder

(1) Remove one screw (A) and remove the rotary encoder by pulling it up.
(2) When installing the rotary encoder, bring the register marks into alignment as indicated in Fig.2-2-18.

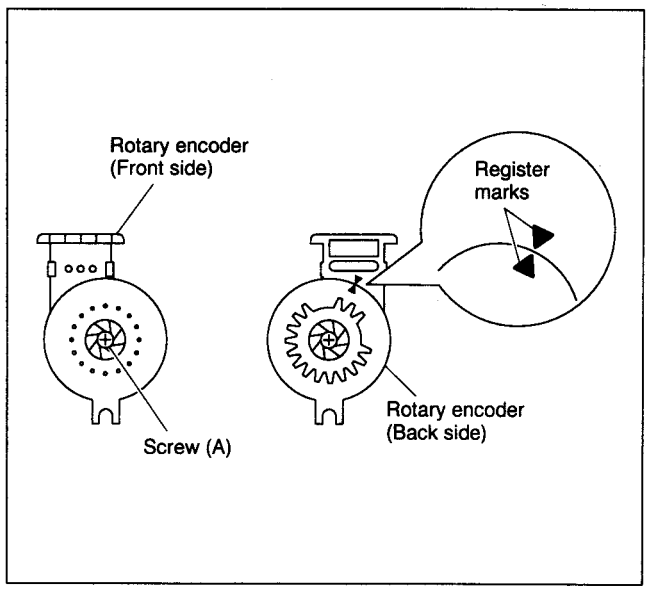


Fig. 2-2-18

2.2.11 Clutch Unit

(1) Remove the belt wound around the capstan motor and the clutch unit.
(2) Remove the slit washer and remove the clutch unit.

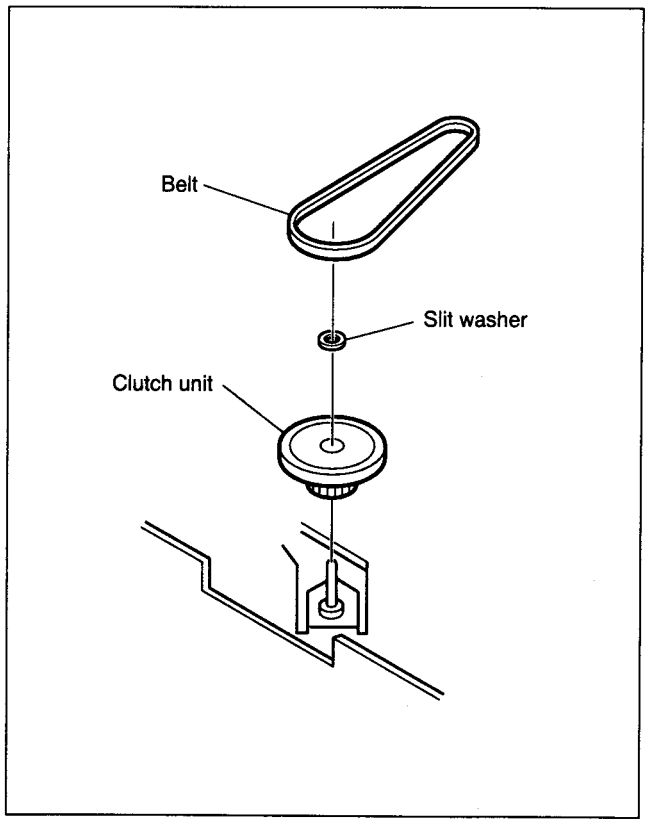


Fig. 2-2-19

2.2.12 Change Lever and Direct Gear

(1) Release two lugs of the rotary encoder guide in the arrow-indicated direction and remove the change lever.
(2) Remove the slit washer retaining the direct gear and remove the latter.
Take care of the two washers and one spring on and under the direct gear. (See Fig.2-2-20)

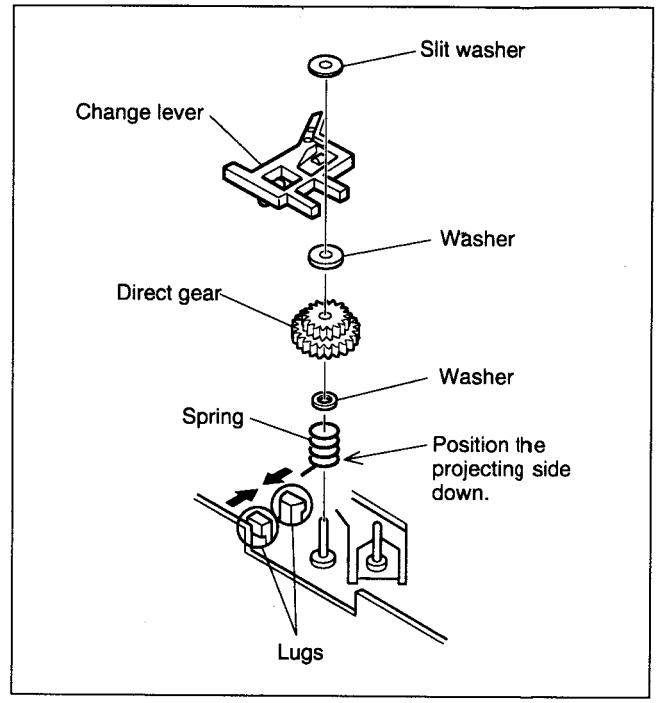


Fig. 2-2-20

2.2.13 Link Lever

(1) Remove the two slit washers.
(2) Remove the link lever by lifting it from the shaft retained by the slit washers. Then swing the link lever counterclockwise and remove it from the lock member of the control plate.

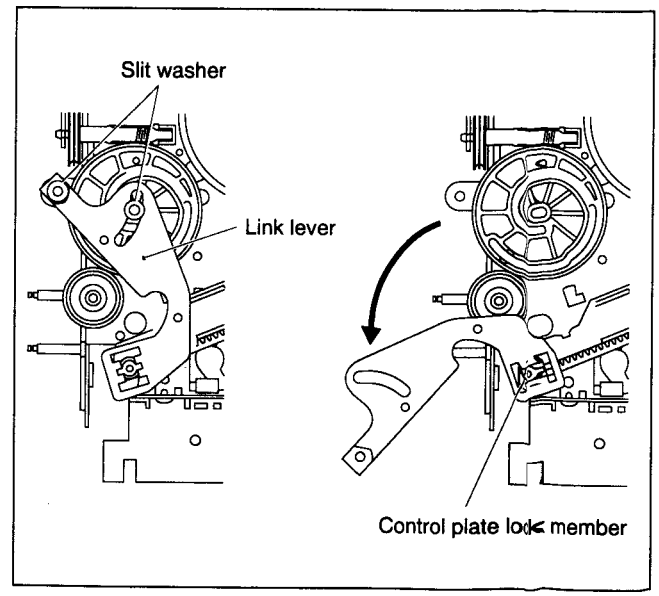


Fig. 2-2-21

2.2.14 Cassette Gear, Control Cam and Worm Gear

(1) Remove the control cam by lifting it.
(2) Open the two lugs of the cassette gear outward and pull the latter off.
(3) Remove the belt wound around the worm gear and the loading motor.
(4) Open the lug of the lid guide outward and remove the worm gear.
(5) When installing the control cam, make sure that the register hole at the control cam is in alignment with the register hole of the main deck. (See Fig.2-2-22)

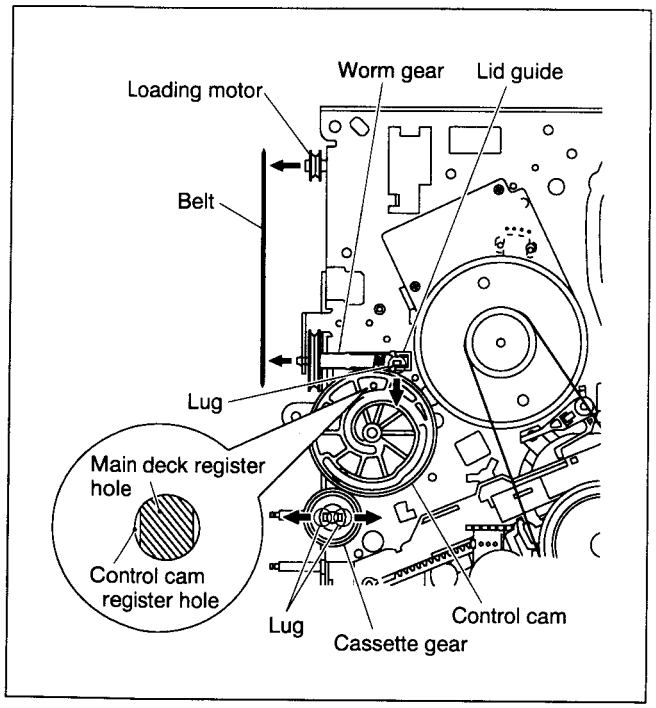


Fig. 2-2-22

2.2.15 Control Plate

1. How to remove

(1) Remove one screw (A) retaining the control plate bracket and remove the latter.
(2) Slide the control plate as indicated by the arrow and remove the control plate. (See Fig.2-2-23)

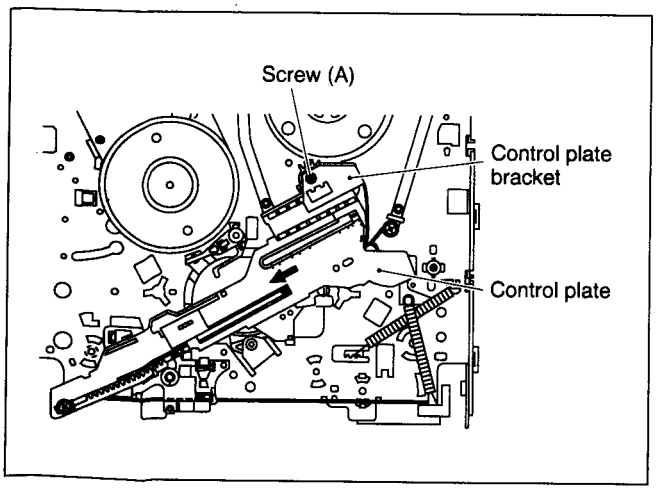


Fig. 2-2-23

2. How to install

(1) Adjust the position of the idler arm pin as indicated in Fig.2-2-24. (to the left of center of the R section)
(2) Bring the positioning hole of the take-up lever into alignment with the hole at the control plate guide and fix the position by inserting a 1.5 mm hexagonal wrench.
(3) Press-fit the pole base (on the supply side) as indicated by the arrow and install the control plate so that section A of the loading arm gear shaft fits into hole (A) of the control plate, section B of the control plate guide into hole (B), and the control plate comes under section C of the rotary encoder guide and section D of the loading arm (on the take-up side). Then slide the whole control plate in the arrow-indicated direction. (See Fig.2-2-25).
(4) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft. (See Fig.2-2-25)
(5) Pull off the hexagonal wrench for positioning.

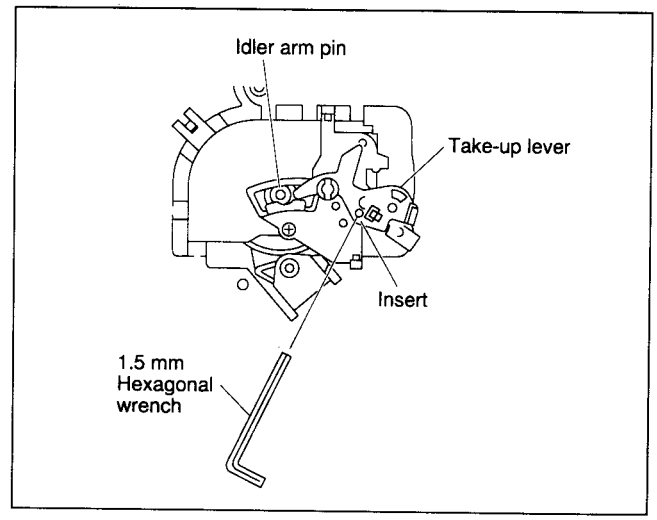


Fig. 2-2-24

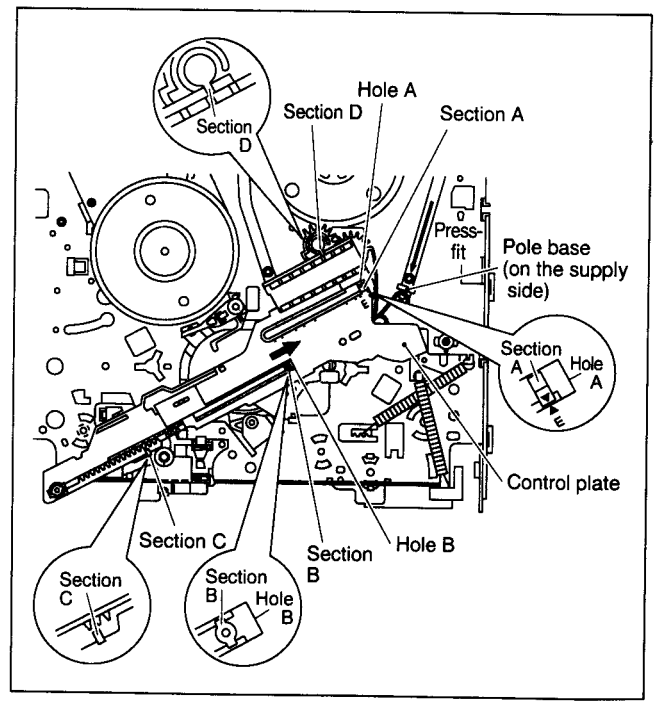


Fig. 2-2-25

2.2.16 Loading Arm (on the supply or take-up side) and Loading Arm Gear Shaft

1. How to remove

(1) Remove the loading arm (on the supply side) by loosening screw (A) in Fig.2-2-26.

(2) Remove screw (B) in Fig.2-2-26 and slide the pole base in the loading direction with the spring held on the pole base (on the take-up side). (See Fig.2-2-26)

(3) Pull the spring out of the pole base. Turn the loading arm clockwise through about 45 degrees so that the notch of the loading arm is in alignment with the projection of the loading arm gear shaft and lift it.
Likewise, turn the loading arm counterclockwise through 180 degrees so that the notch is in alignment with the projection and remove the loading arm (on the take-up side). (See Fig.2-2-27)

(4) When removing the loading arm gear shaft, be sure of first removing the screw retaining the drum assembly (on the back side of the loading arm gear shaft). Then remove one screw (C) and remove the loading arm gear shaft by sliding it in the arrow-indicated direction.

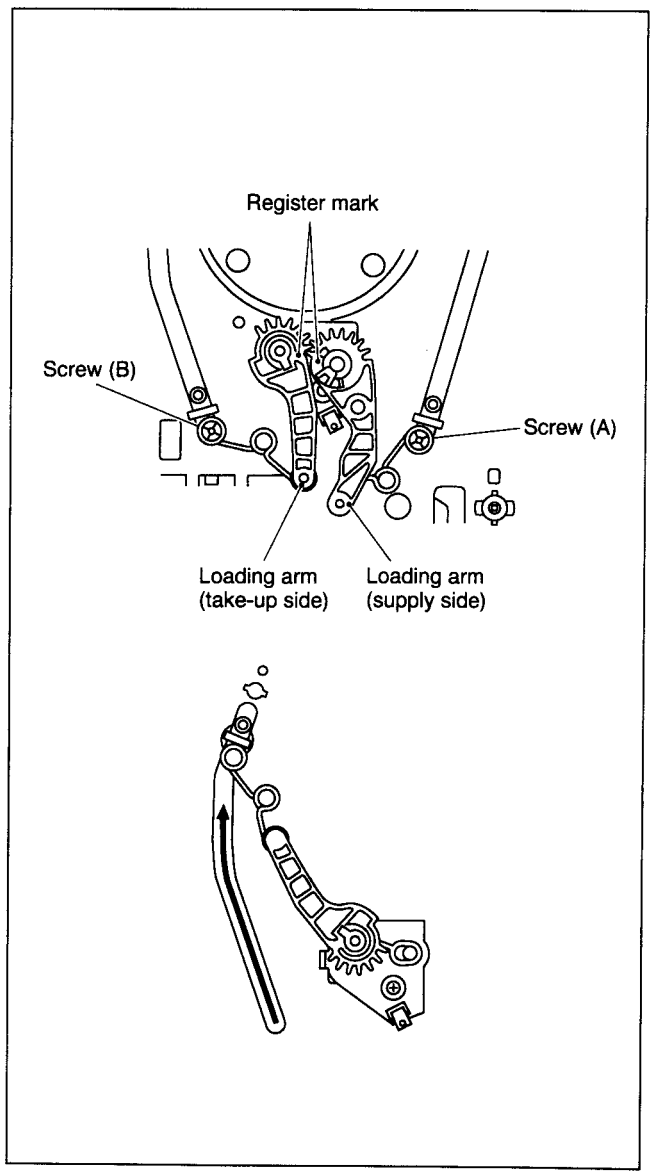


Fig. 2-2-26

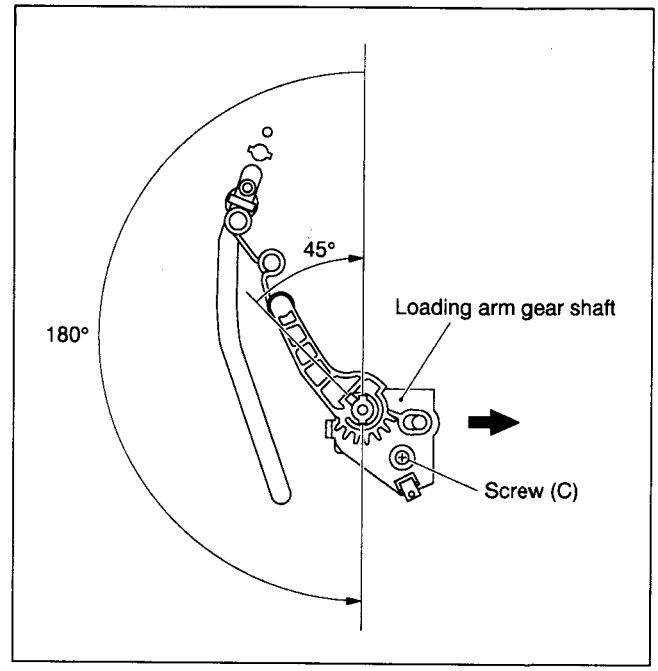


Fig. 2-2-27

2. How to install

(1) Install the loading arm (on the take-up side) as indicated in Fig.2-2-28 and turn it clockwise through 180 degrees so that the loading arm reaches the bottom of the loading arm gear shaft.

(2) Then turn the loading arm (on the take-up side) counterclockwise through 180 degrees. Hang the spring on the pole base and tighten the screw.

(3) Install the loading arm (on the supply side) so that the register mark of the loading arm (on the take-up side) is in alignment with the register mark of the loading arm (on the supply side). Then hang the spring on the pole base and tighten the screw. (See Fig.2-2-26).

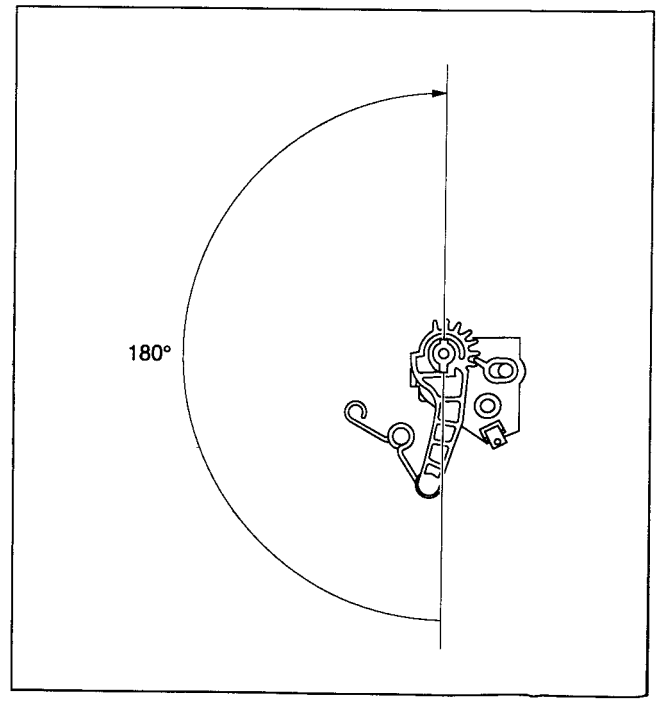


Fig. 2-2-28

2.2.17 Take-up Lever, Take-up Head and Control Plate Guide

(1) Remove the spring of the take-up lever from the main deck.
(2) Remove one lug of the take-up lever from the main deck and pull out the take-up lever and the take-up head together.
(3) Remove one screw (A).
(4) Remove two lugs of the control plate guide from the main deck. Locate the idler arm pin in the center of the R section of the control plate and remove the latter.

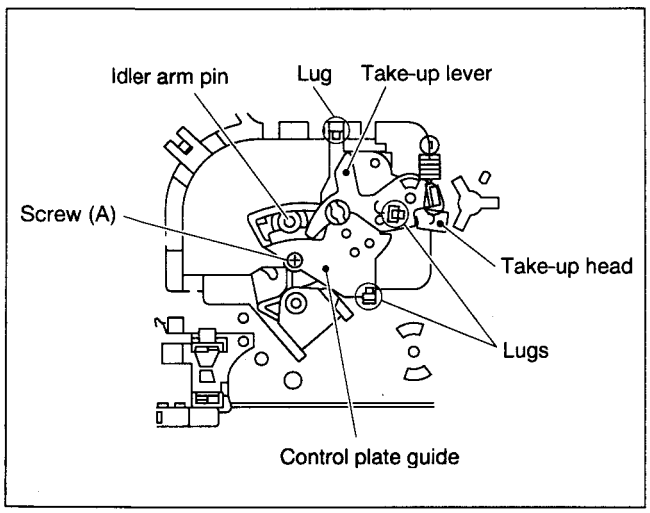


Fig. 2-2-29

2.2.18 Capstan Brake

(1) Move lug A of the capstan brake in the arrow-indicated direction so that it comes into alignment with the notch of the main deck. (See Fig. 2-2-30)
(2) Remove lug B of the capstan brake from the main deck and remove the capstan brake.

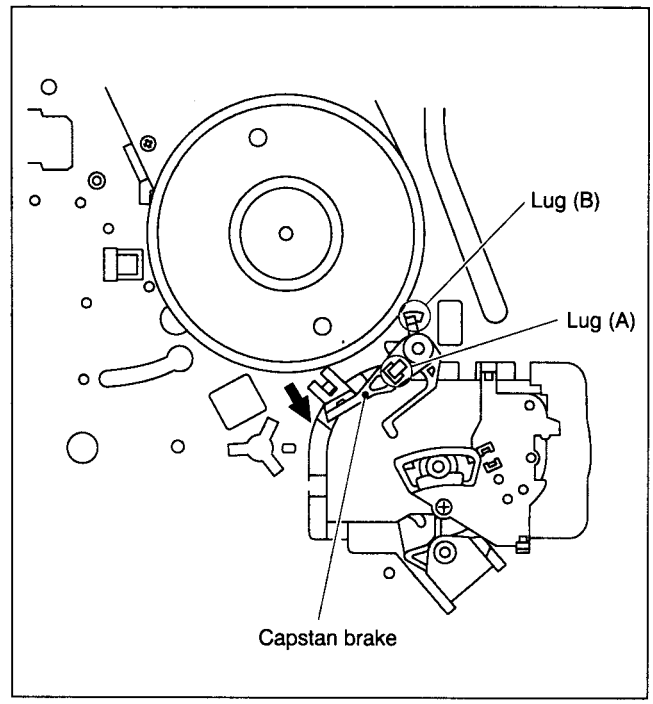


Fig. 2-2-30

2.2.19 Drive Gear and Drive Arm

1. How to remove

(1) Remove the cassette holder assembly. (See 2.2.3 How to remove the cassette holder assembly)
(2) Pull out the drive gear and remove the drive arm.

2. How to install

(1) Insert section A of the drive arm into section B of the main deck.
(2) Insert section ① of drive gear into hole ○ of the drive arm and section ② into hole □. (See Fig. 2-2-31)

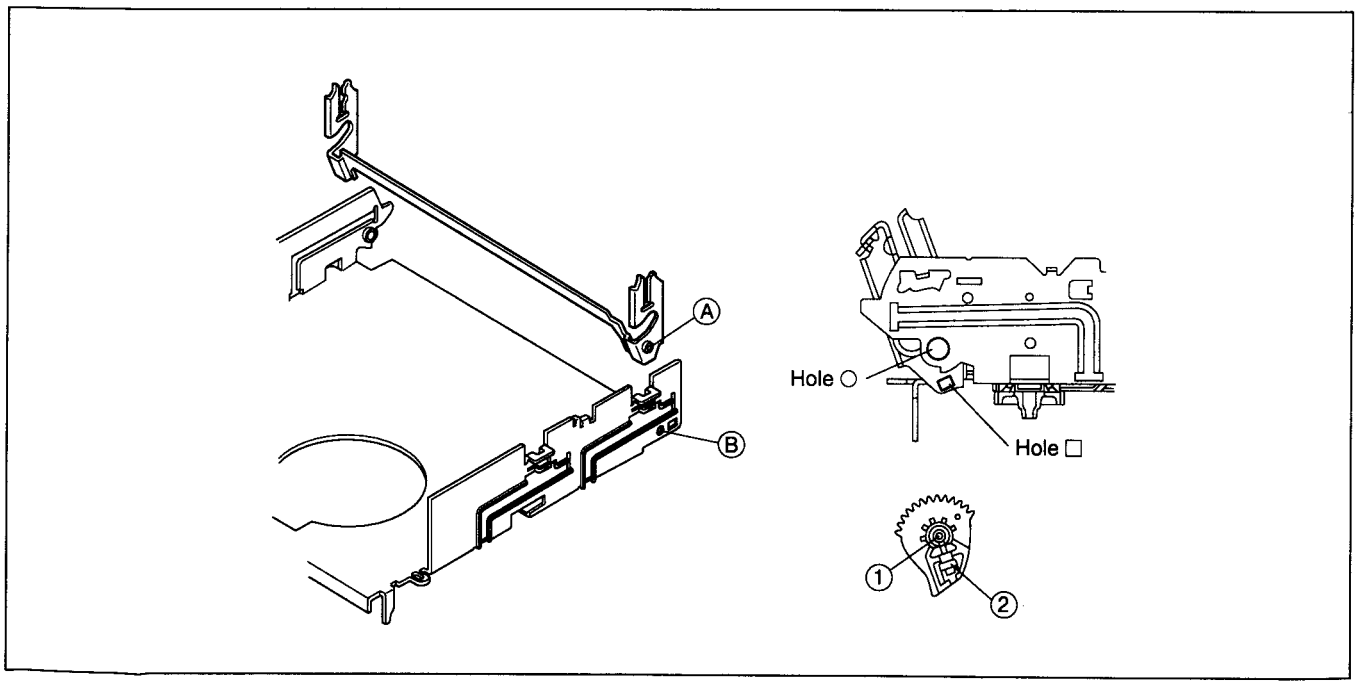


Fig. 2-2-31

2.2.20 Sub Brake (on the take-up side)

(1) Remove the spring attached to the lid guide and sub brake.
(2) Bring lug Ⓐ of the sub brake into alignment with the notch of the main deck.
(3) Remove lugs Ⓑ and Ⓒ of the sub brake from the main deck and remove the sub brake.

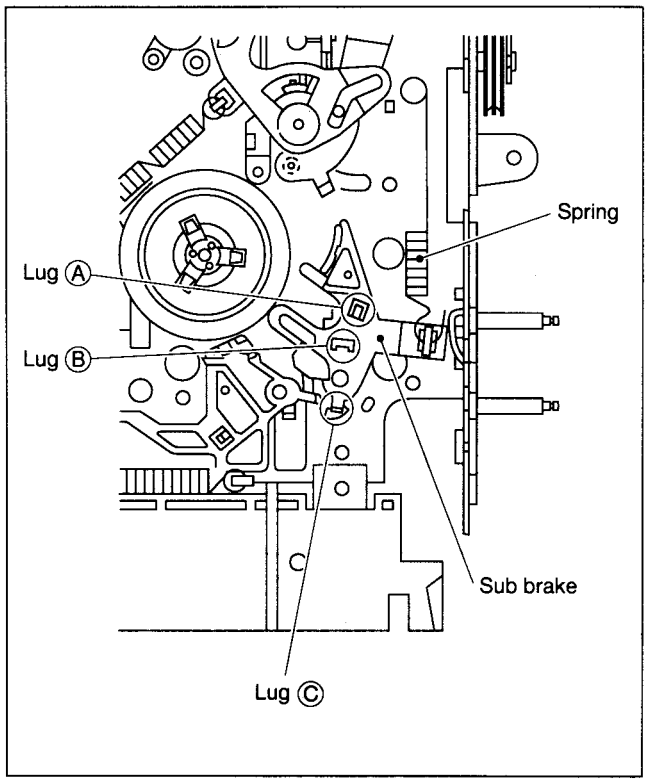


Fig. 2-2-32

2.2.21 Main Brake (on the take-up side), Reel Disk (on the take-up side) and Main Brake (on the supply side)

(1) Move the main brake (on the take-up side) in the arrow-indicated direction and remove the reel disk (on the take-up side).
(2) Remove the spring attached to the main brake.
(3) Remove lug Ⓐ of the main brake (on the take-up side) and pull out lug Ⓑ after bringing it into alignment with the main deck notch.
(4) Remove lugs Ⓒ and Ⓓ of the main brake (on the supply side) from the main deck and pull them off. (See Fig.2-2-33)

Note: *If the main brake is difficult to remove, press it and hold the adjustment pin from the back side of the main deck when attempting to remove it.*
After the adjustment pin has been removed or the main brake or the reel disk on the supply or take-up side have been replaced, it is required to adjust the main brake torque. See page 2-24 for the detailed adjustment procedures.

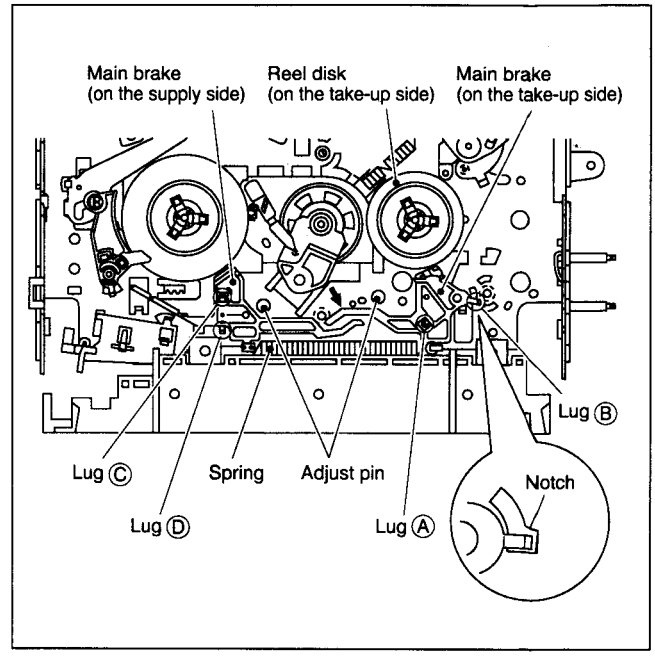


Fig. 2-2-33

2.2.22 Tension Brake, Reel Disk (on the supply side) and Tension Arm

(1) Remove the three lugs of the tension brake from the main deck and pull them off.
(2) Remove the reel disk (on the supply side) by loosening in the arrow-indicated direction the main brake (on the supply side).
(3) Remove the tension spring on the main deck back side and remove the lugs of the tension arm bearing to pull up and remove the tension arm. (See Fig.2-2-34)

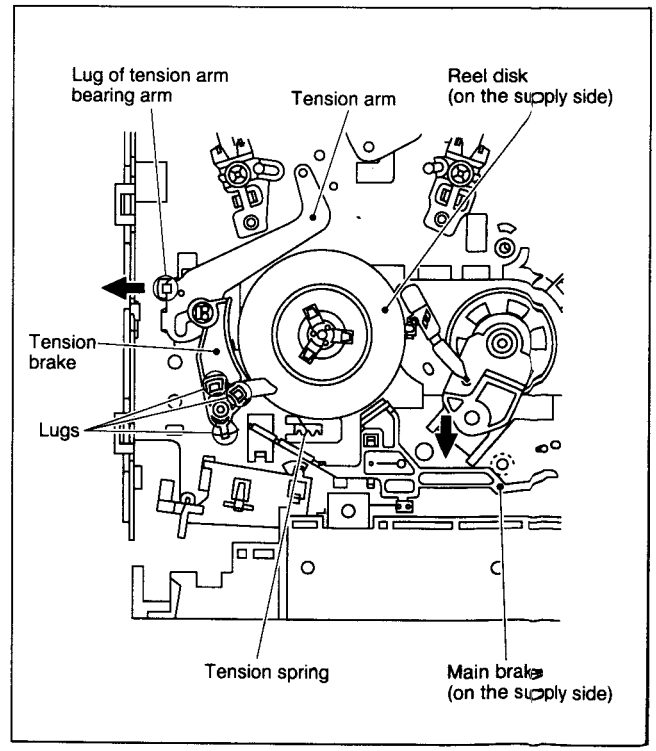


Fig. 2-2-34

2.2.23 Idler Lever, Idler Arm and Reel Shaft

(1) Remove one lug of the idler lever from the main deck and remove the hook fitted in the idler arm hole by lifting it.
(2) Remove the slit washer and pull out the idler arm.
(3) Turn the reel shaft counterclockwise through 60 degrees and remove it. (See Fig.2-2-35)

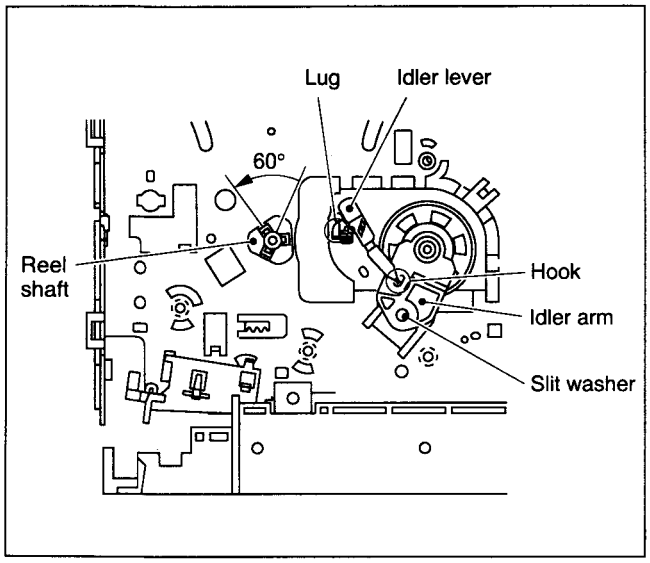


Fig. 2-2-35

2.2.24 Stator Assembly

(1) Remove two screws (A).
(2) Remove the stator assembly by lifting in the arrow-indicated direction (Take care that the brush spring does not jump out).
(3) Remove the flat cable.
(4) After installation, be sure to perform the 3.2.1 PB switching point adjustment according to the electrical adjustment procedure.

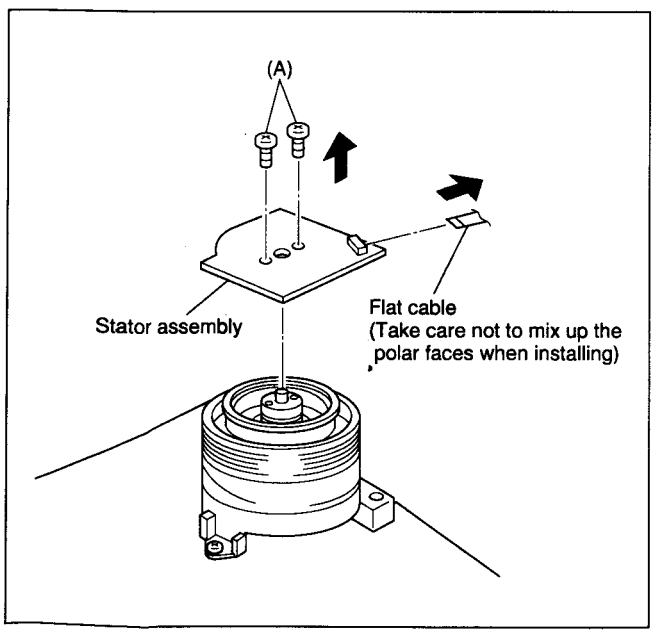


Fig. 2-2-36

2.2.25 Rotor Assembly

(1) Remove the stator assembly.
(2) Remove the two screws (B) and remove the rotor assembly.

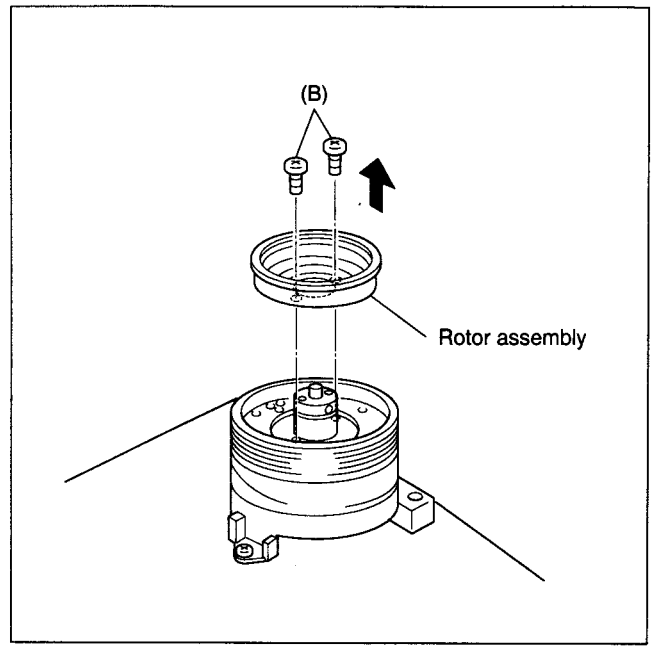


Fig. 2-2-37

Note: *When installing the rotor assembly, note that a normal picture cannot be obtained without ensuring the phase matching as mentioned below.*

(3) Match the phases of the upper drum and the rotor assembly as indicated in Fig.2-2-38.
(4) Place the upper drum hole (a) over the rotor assembly holes (b) (with three holes to be aligned) and tighten the two screws (B). (See Fig.2-2-38)

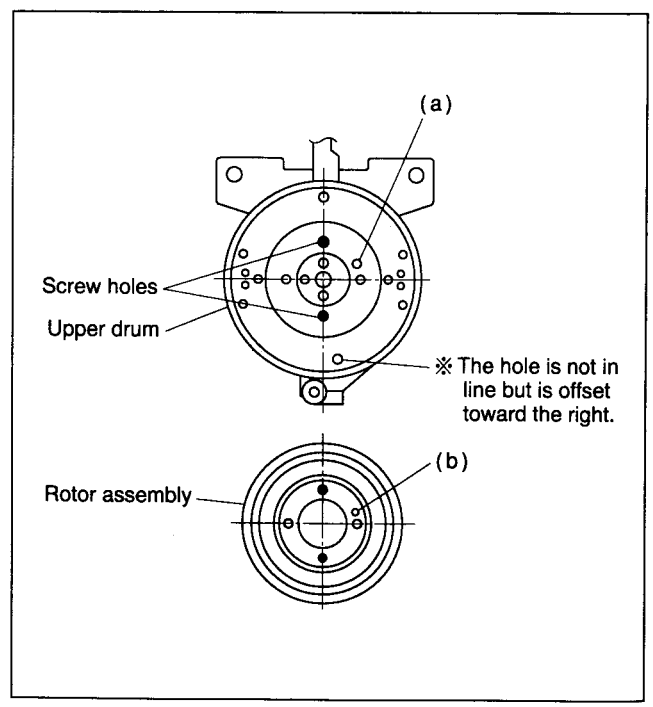


Fig. 2-2-38

2.2.26 Upper Drum Assembly

1. How to remove

(1) Remove the stator assembly and rotor assembly. (See Fig. 2-2-36 and 2-2-37)

(2) Loosen the screw of the collar assembly using a 1.5 mm hexagonal wrench and remove the collar assembly. Also remove the brush, spring and cap at one time.

(3) Remove the upper drum assembly and remove the washer using tweezers.

Note: *When replacement is required, control the up-down movement of the brush. Never apply grease.*

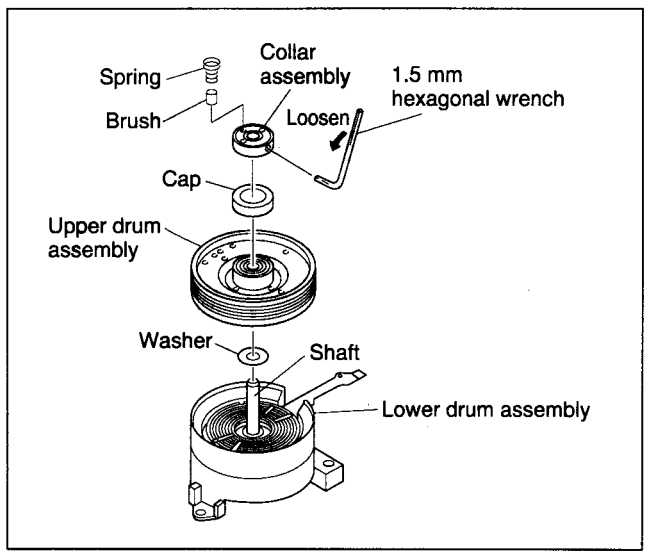


Fig. 2-2-39 Upper drum assembly-1

2. How to install

(1) Clean coil parts of the lower drum assembly and the newly installed upper drum assembly with an air brush in advance. (See Fig.2-2-40).

(2) Install a new washer and upper drum assembly on the drum shaft. (See Fig.2-2-39)

Note: *When replacing the upper drum assembly, replace it the together with the washer.*

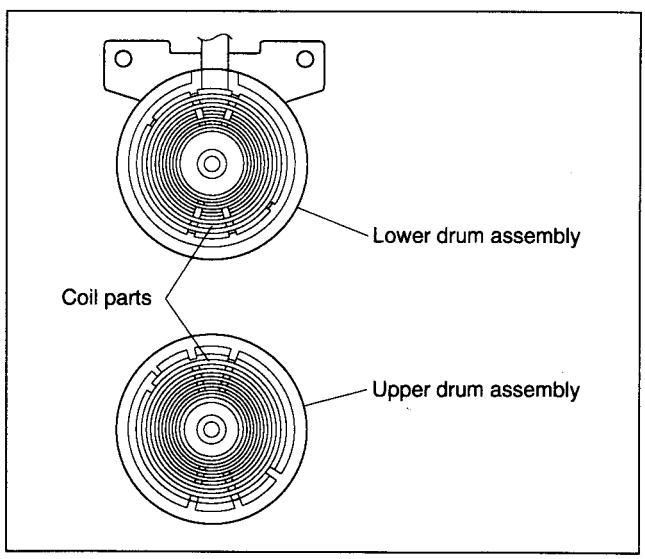


Fig. 2-2-40

(3) Position the collar assembly as indicated in Fig.2-41 while controlling its up- down movement.

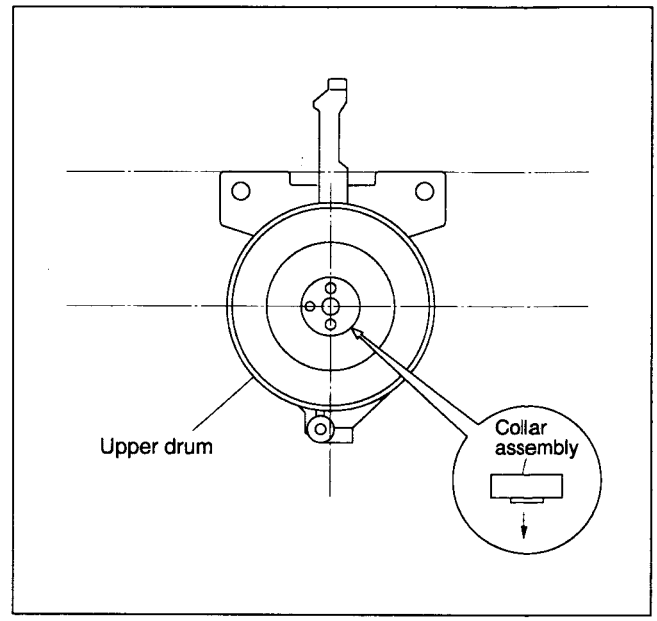


Fig. 2-2-41

(4) Secure the collar assembly in position with a hexagonal wrench while pressing its top with the fingers.

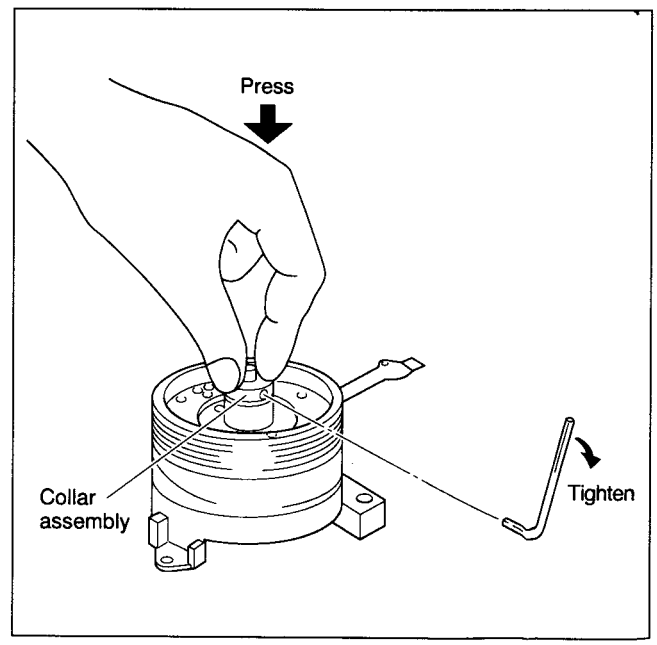


Fig. 2-2-42

(5) After installation, gently turn the upper drum with your hand to make sure that it turns normally.

(6) Install the rotor assembly and stator assembly according to Fig. 2-2-36 and 2-2-38.

(7) When installation is complete, clean the upper drum assembly and lower the drum assembly and carry out the following adjustments.

- PB switching point adjustment
- Slow tracking adjustment
- Compatibility adjustment (Be sure to check for compatibility for the EP mode.)

2.3 MAJOR PARTS INSTALLATION (PHASE MATCHING BETWEEN MECHANICAL PARTS)

2.3.1 Before Assembly of the Parts

The mechanism of this unit is closely linked with the rotary encoder and system controller circuits.
Since the system controller detects the status of mechanical operation in response to phases of the rotary encoder (internal switch positions), the mechanism may not operate properly unless such parts as the rotary encoder, control plate, loading arm assembly, control cam, cassette gear, limit gear, relay gear and drive gear are installed in their correct positions.
Especially, this model is not provided with any cassette housing assembly, so that cassette loading and unloading must be accomplished by operation of the cassette holder assembly. The latter is in turn driven by such parts as drive gear, relay gear and limit gear. Exercise enough care, therefore, to have the phases of all this gear matching one another.
Perform the installation of major parts (including phase matching) in the mechanism assembling mode as in the previous section.

2.3.2 Loading Arm Assembly (on the Supply or Take-up Side)

(1) Return the pole base assembly to the foremost position in the unloading direction.
(2) Install the loading arm assembly so that the register mark on the gear of the supply side loading arm is in alignment with the one on the take-up side loading arm as indicated in Fig. 2-3-1.
See 2.2.16 "2. How to install" of the foregoing section for details of installation.

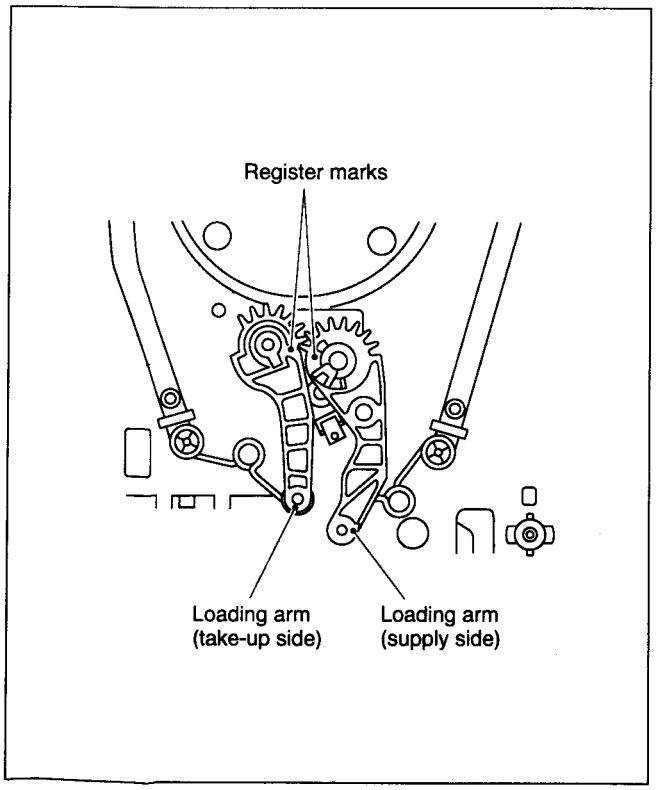


Fig. 2-3-1

2.3.3 Control Plate

(1) With register marks on the both loading arm assemblies in alignment, install the control plate so that the mark ▼ on the loading arm gear shaft is in alignment with mark E of the control plate. (See Fig.2-3-2)
See 2.2.15 "2. How to install" of the foregoing section for details of installation.

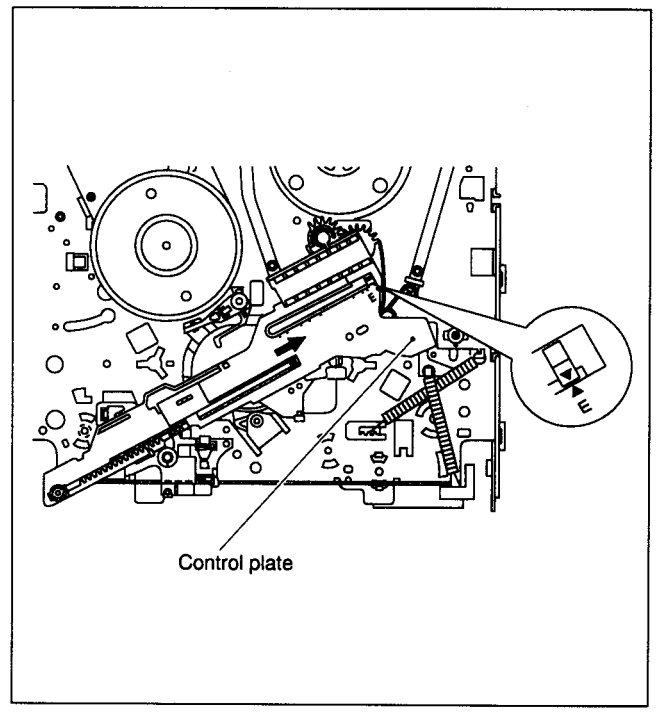


Fig. 2-3-2

2.3.4 Rotary Encoder

(1) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft and bring the register marks on the rotary encoder into alignment as indicated in Fig.2-3-3.
(2) Turn over the rotary encoder with its register marks kept in alignment and install it by fitting on the shaft of the rotary encoder guide and the positioning pin.
(3) Tighten the screw (A) to complete the installation.

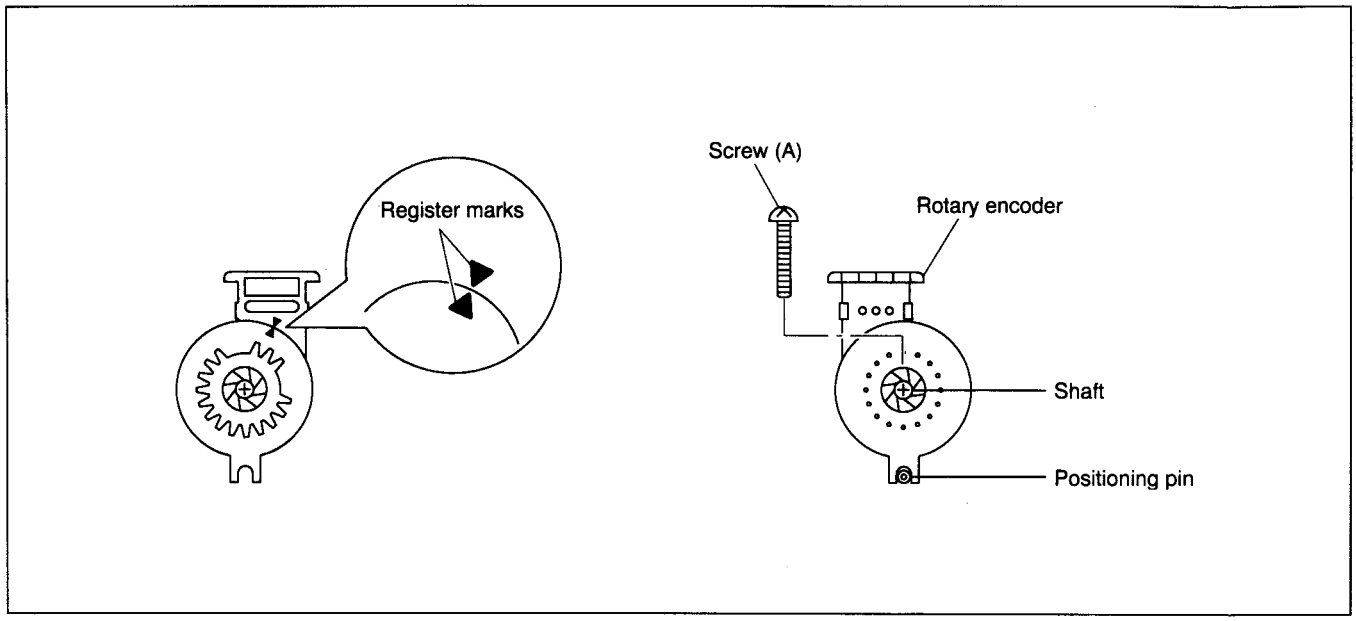


Fig. 2-3-3

2.3.5 Control Cam, Cassette Gear and Link Lever

(1) Install the control cam as indicated in Fig.2-3-4 making sure of the front and back side alignment.
Note here that the register hole of the control cam is in alignment with and allows passage through the register hole of the main deck. Perform fine-adjustment by turning the worm gear.
(2) Install the cassette gear by pushing it until it is locked with a clicking sound. (See Fig.2-3-4)
(3) Insert section (A) of the link lever into section (B) of the control plate as shown in Fig.2-3-5.

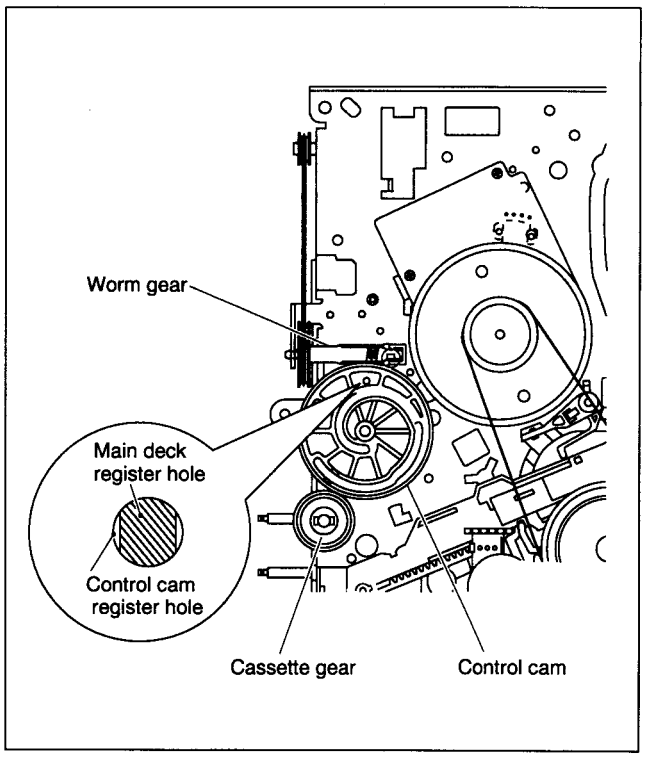


Fig. 2-3-4

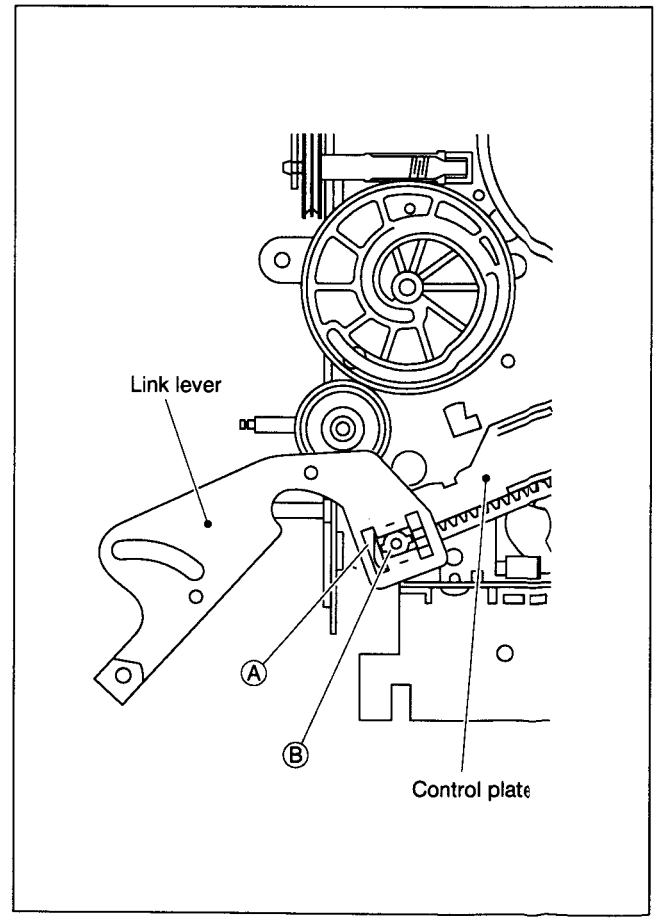


Fig. 2-3-5

(4) Turn the link lever clockwise and mount it on the control cam center shaft Ⓐ and the control cam left-side shaft Ⓑ. (See Fig.2-3-6).
(5) Fasten the slit washers at two points Ⓐ and Ⓑ.

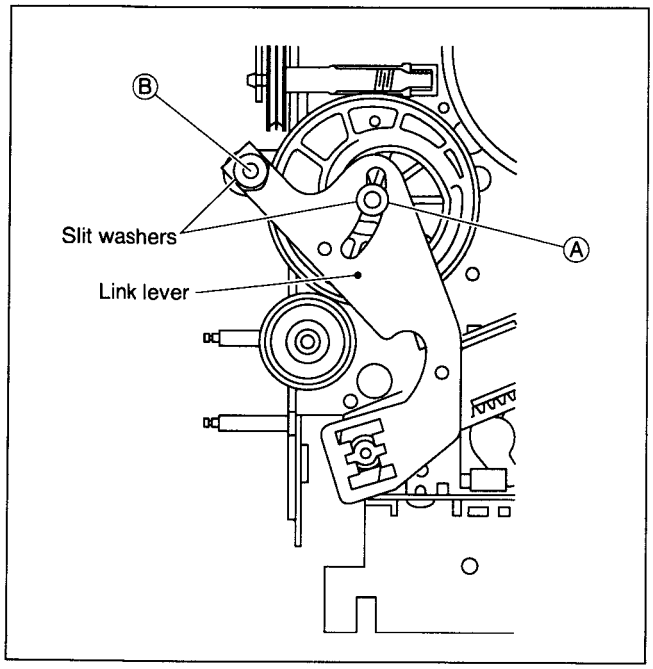


Fig. 2-3-6

2.3.6 Relay Gear, Limit Gear and Drive Gear

(1) Install the limit gear so that the notch at its outer circumference is in alignment with the register hole of the main deck.(See Fig.2-3-7)
(2) Install so that the notch at the outer circumference of the relay gear is in alignment with the notch of the main deck, and at the same time, that the hole A of the relay gear is in alignment with hole A of the limit gear and hole B of the drive gear. (See Fig.2-3-7)

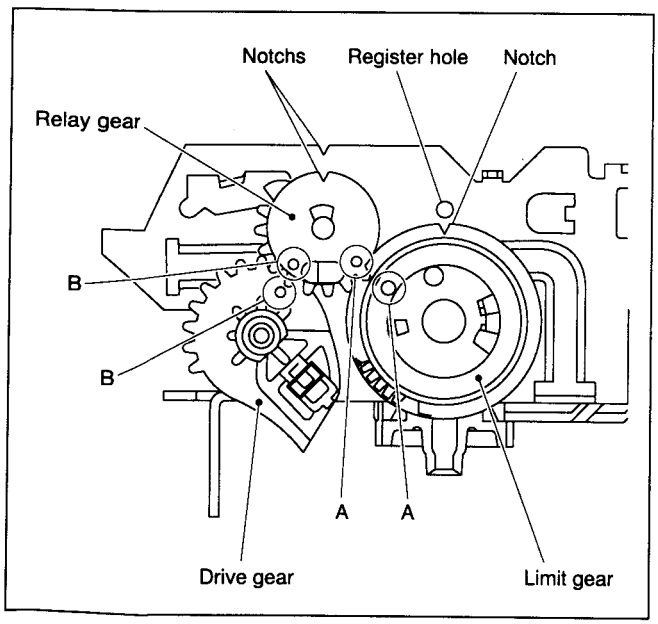


Fig. 2-3-7

2.4 COMPATIBILITY ADJUSTMENT

Notes: • *Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the audio control head, drum assembly or any part of the tape transport system.*
• *To avoid any damage to the alignment tape while performing the compatibility adjustment, get a separate cassette tape (for recording and play back) ready to be used for checking the initial tape running behavior.*

2.4.1 Checking/Adjustment of FM Waveform Linearity

(1) Connect the oscilloscope to TP106(PB FM/COL) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
(2) Playing the alignment tape MHPE, observe the FM waveform.
(3) Press the channel buttons (+) and (–) buttons simultaneously during playback to enter the manual tracking mode (This also brings tracking to the center.)
(4) Make sure that there is no significant level drop of the FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (Fig.2-4-1)
(5) Slightly loosen the set screw under the pole base assembly with a 1.25 mm hexagonal wrench (Take care not to loosen too much). (Fig.2-4-2)
(6) Reduce the FM waveform while pressing the channel buttons (+, –) during playback. If a drop in level is found on the left side as shown in Fig.2-4-3, turn the guide roller of the pole base assembly (supply side) with the roller driver (PTU94002) to make the FM waveform linear.
If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the guide roller to make it linear. (Fig.2-4-3)
(7) Then play MHPE-L and make sure that the FM waveform varies in parallel and linearly with the tracking operation. When required, perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
(8) After adjustment, tighten the set screw under the pole base assembly. (Take care not to tighten too much)
(9) After tightening the set screw, play the alignment tape MHPE and MHPE-L again to make sure that the FM waveform has correct variation.

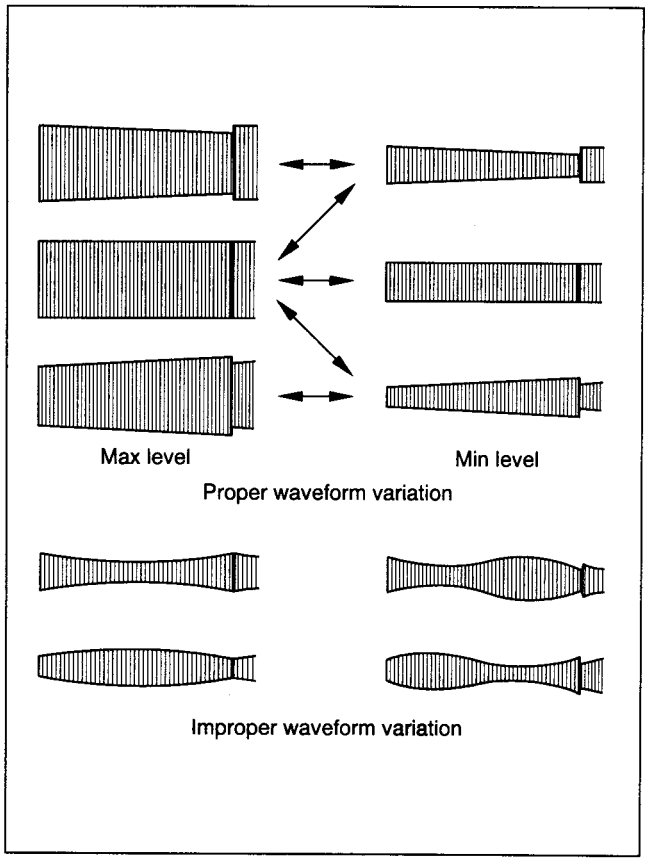


Fig. 2-4-1

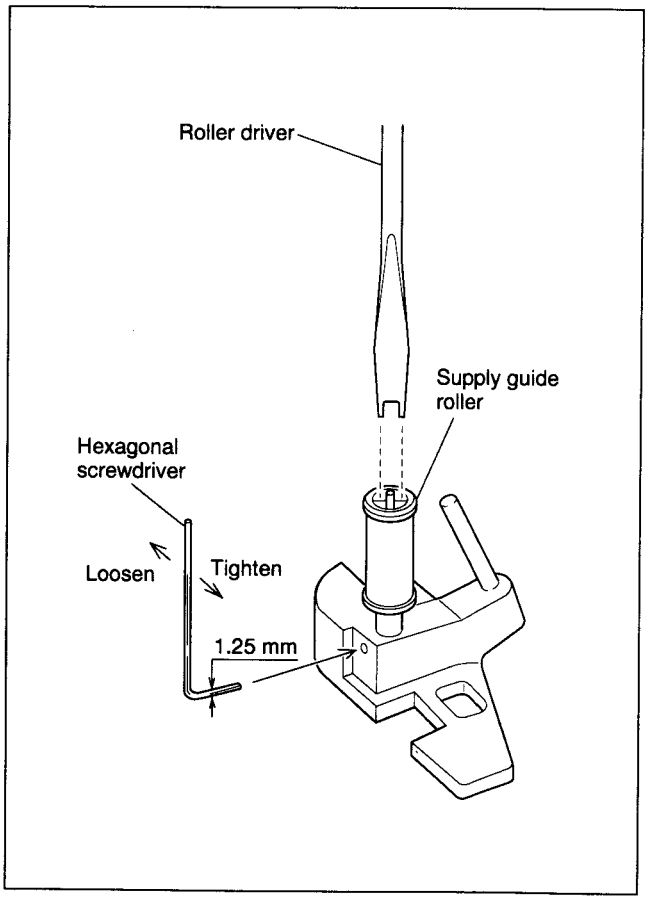


Fig. 2-4-2

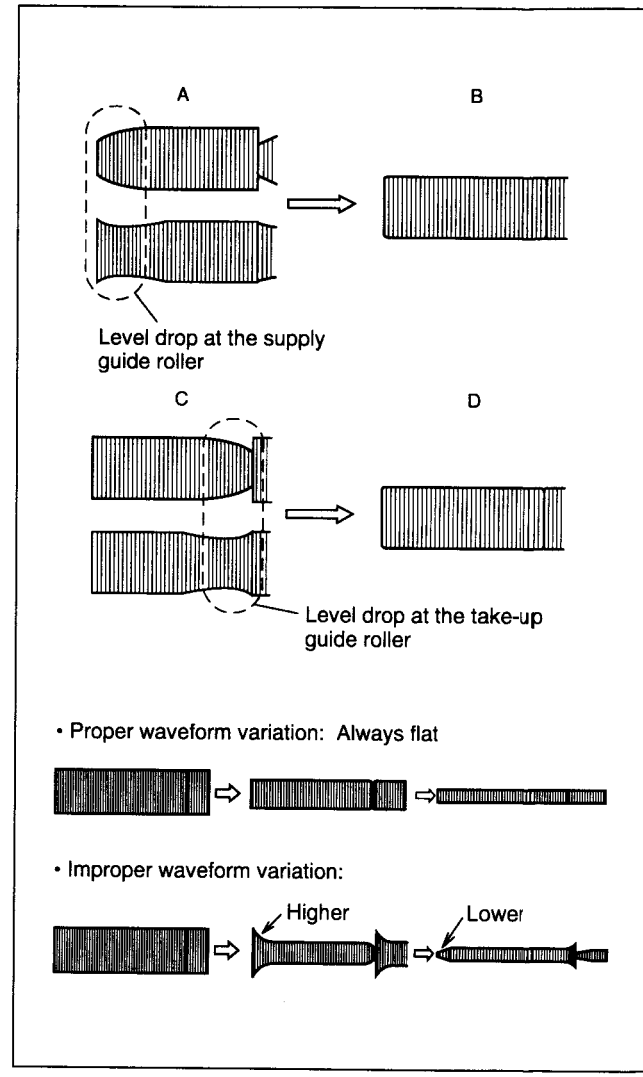


Fig. 2-4-3

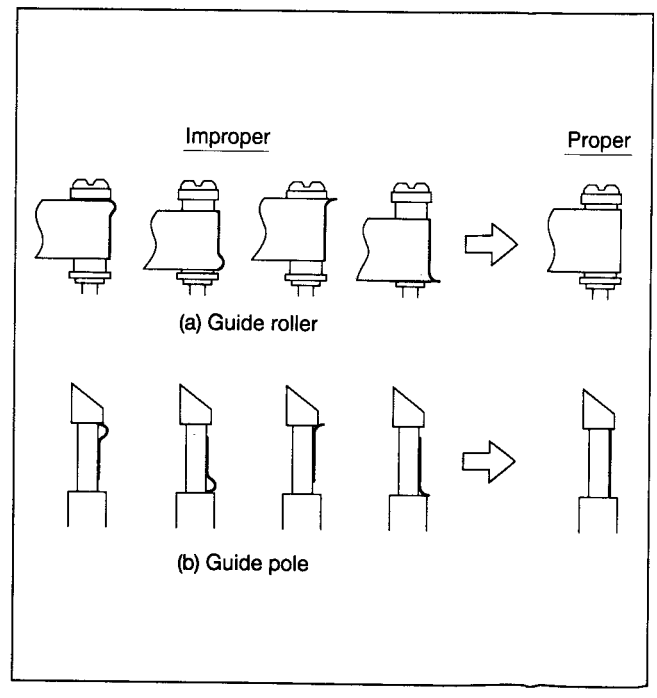


Fig. 2-4-4

2.4.2 Checking/Adjustment of the Height and Tilt of the Audio Control Head

Note: *Set a temporary level of the height of the A/C head in advance to make the adjustment easier. (See Fig.2-2-14)*

(1) Connect CH-1 of the oscilloscope to AUDIO OUT and CH-2 to TP4001 (CTL P) of the main board and observe the waveforms on both channels in the ALT mode.
(2) Play the alignment tape MHPE and adjust it by turning screws (1), (2) and (3) little by little until the waveform of both the audio output signal and the control pulse reach maximum. Screw (1) and screw (3) are for adjustment of tilt and screw (2) for azimuth.

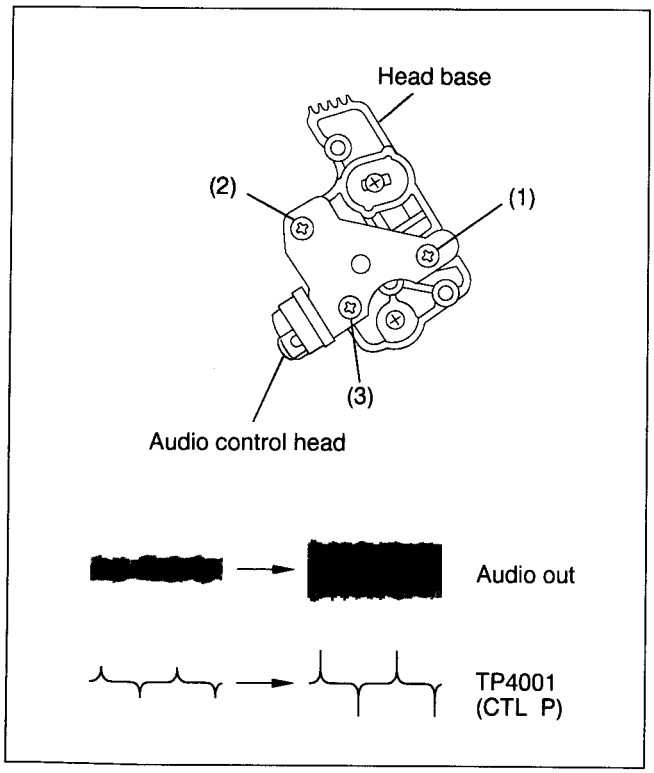


Fig. 2-4-5

2.4.3 Checking/Adjustment of the Audio Control Head Phase (X-Value)

(1) Connect the oscilloscope to TP106(PB FM/COL) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
(2) Play the alignment tape MHPE and observe the FM waveforms.
(3) Press the channel buttons (+)'and (–) buttons simultaneously during playback to enter the manual tracking mode (This also brings tracking to the center.)
(4) Loosen screws (4) and (5) so that the A/C head position bit (PTU94010) is set as indicated in Fig.2-4-6.
(5) Turn the A/C head position and first move the audio control head fully up to the capstan head. Then gradually return the audio control head toward the drum and stop it where the FM waveform reaches its maximum for the first time. Then tighten screw (4) temporarily.
(6) Then play the alignment tape MHPE-L.
(7) Press the channel buttons (+) and (–) buttons simultaneously during playback to enter the manual tracking mode (This also brings the tracking to the center.)
(8) Perform the tracking operation and make sure that the FM waveform is at its maximum.
(9) If it is not at maximum, loosen the temporarily tightened screw (4) and turn the A/C head position bit to bring the audio control head to a position, around where the waveform reaches its maximum for the first time. Then tighten screws (4) and (5).

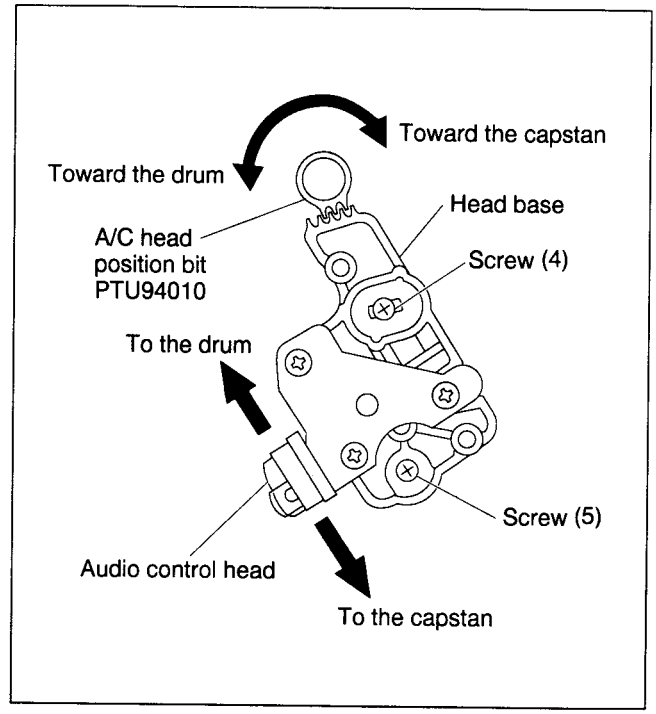


Fig. 2-4-6

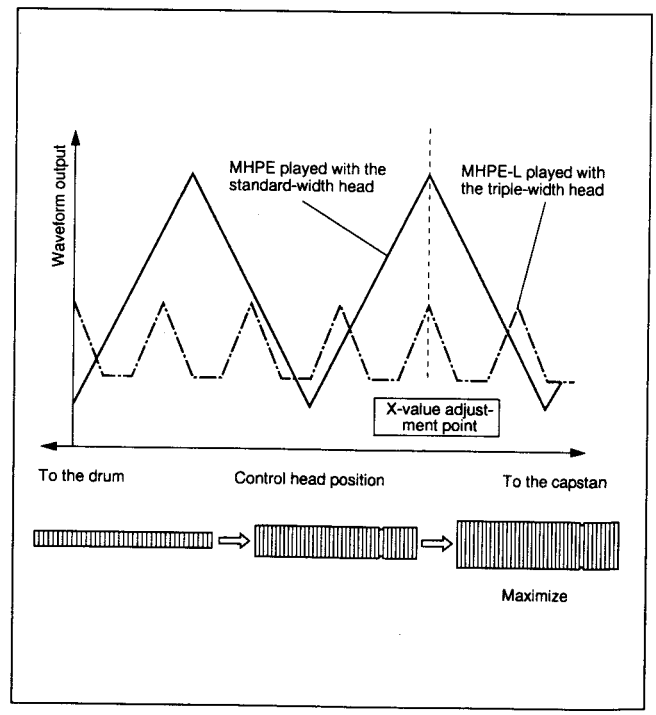


Fig. 2-4-7

2.4.4 Checking the Triple-width Auto Tracking

Note: *Set the remote control cable of the video recorder to A mode.*
(The unit set in B mode does not accept the remote control cable of the presetting unit.)

(1) Connect the oscilloscope to TP106(PB FM/COL) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
(2) Playing the alignment tape MHPE and observing the FM waveform, make sure that the auto tracking operation is complete.
(3) Press the button "D" of the presetting unit twice.
(4) Make sure that the MHPE-L is not ejected.
(5) If ejected, again perform the phase (X-value) adjustment of the audio control head.

2.4.5 Checking/Adjustment of the Tension Pole

(1) Check the back tension cassette gauge (PUJ48076-2) to make sure that the indicator points to 29 - 46 g-cm.
(2) If the indicated value is outside this range, carry out the following adjustment steps.
  1) Select the mechanism servicing mode. (See 1.5 MECHANISM SERVICE MODE)
  2) While in the Play mode, turn the adjustment pin with a straight-slot screwdriver while taking care not to touch the 2.5 mm dia. pole. (See Fig.2-4-8).

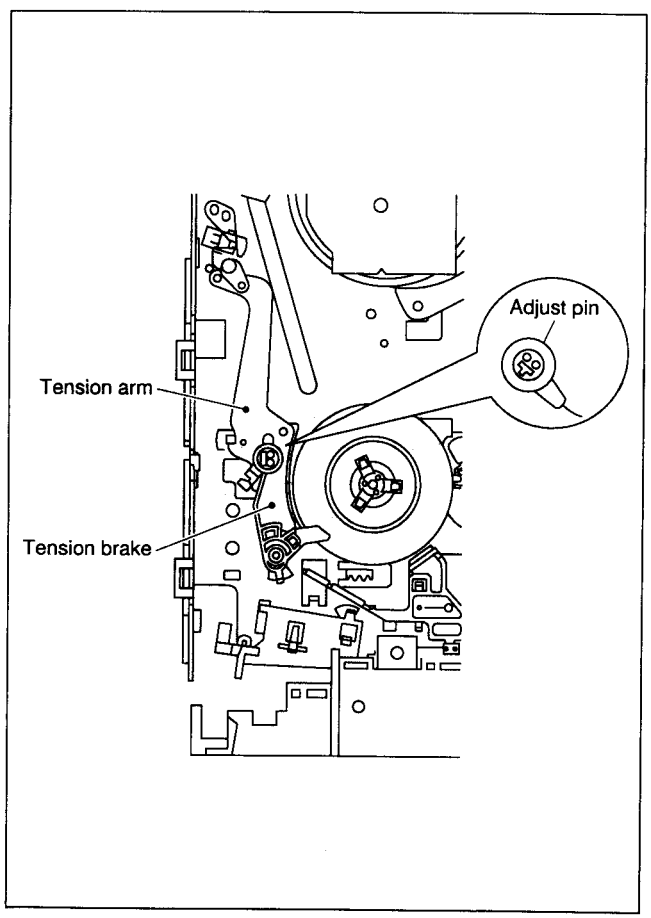


Fig. 2-4-8

2.4.6 Adjustment of the Tension Stud

(1) Adjust so that the left side of the tension stud is on the extension of the notch line of the main deck as indicated in Fig.2-4-9.

Note: *Adjustment is not usually necessary for the tension stud. Perform this adjustment only when it is out of position.*

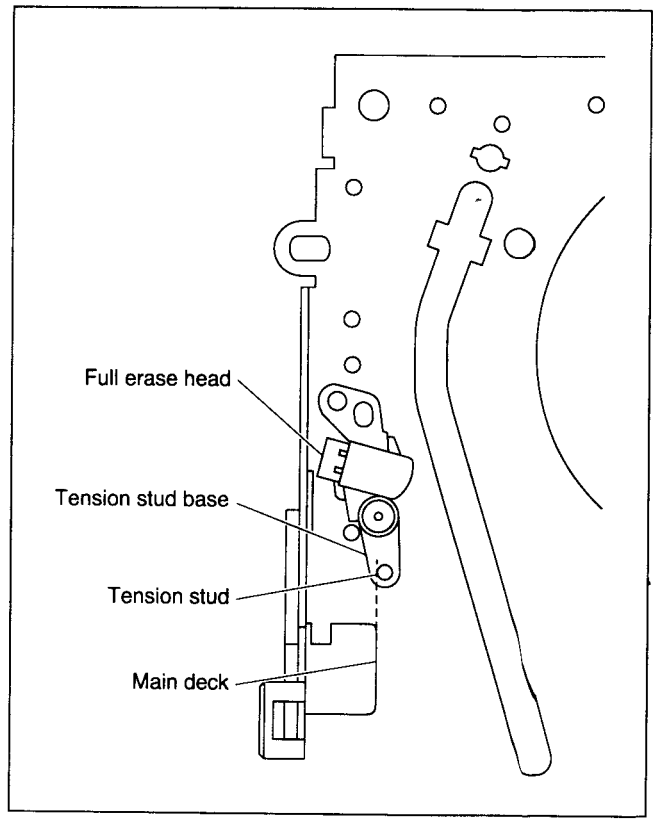


Fig. 2-4-9

2.4.7 Main Brake Torque Adjustment

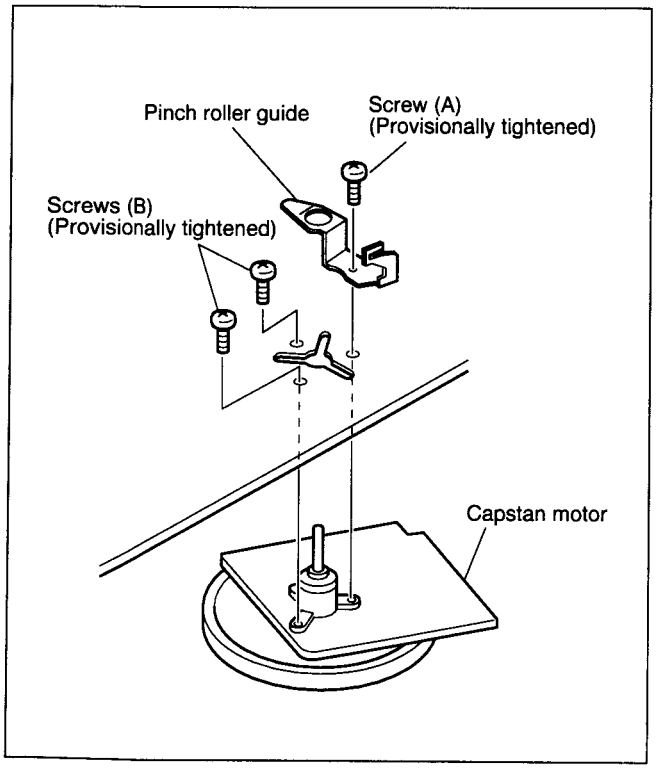
Note: Adjustment of the main brake torque is required after the adjustment pin has been removed or the main brake or the reel base on the supply or take-up side have been replaced, removed or attached.

(1) Rotate the pulley of the loading motor by hand to align the mark ▼ on the loading arm gear shaft with the ST marking on the control plate (i.e. set to the STOP mode position).
(2) Insert a torque gauge (PUJ48075-2) into the reel base on the side to be played, hold the torque gauge lightly, rotate it clockwise when measuring the supply side torque or counterclockwise when measuring the take-up side torque, and read the value indicated at the moment the reel base starts to slip.
(3) Make sure that the main brake torque values on the supply and take-up sides are both between $39.2 - 78.4 \times 10^{-3}$ N-m (400 — 800 gf-cm). If the value is outside the specified range, adjust to the specified value by rotating the adjustment pin.
If an adjustment by using the adjustment pin is not possible, replace the main brake.

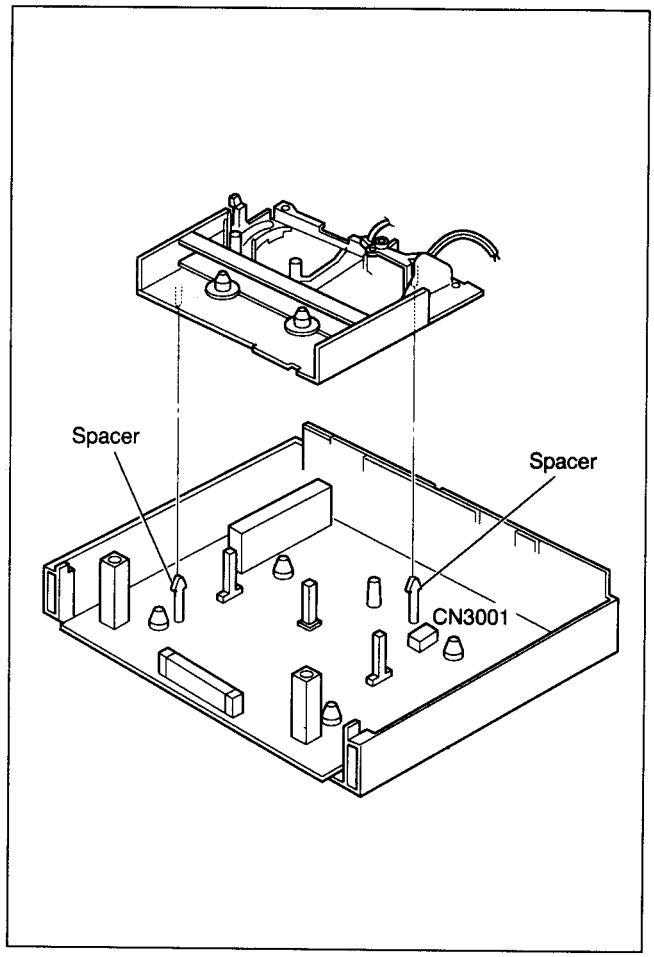
How to Mount the Capstan Motor (Centering the Mounting Position)

When the capstan motor has once been removed and then reinstalled out of the initial correct position in the rotational direction, the capstan motor current may be unstable during operation in high or low temperatures. This may result in greater Wow & Flutter and occasionally in power breakdown because of current over - load. Install the capstan motor while following the procedure given below.
(The capstan motor is centrally located when the unit is shipped from the factory.)

1. Provisionally tighten one screw (A) together the pinch roller guide and the two screws (B) securing the capstan motor.



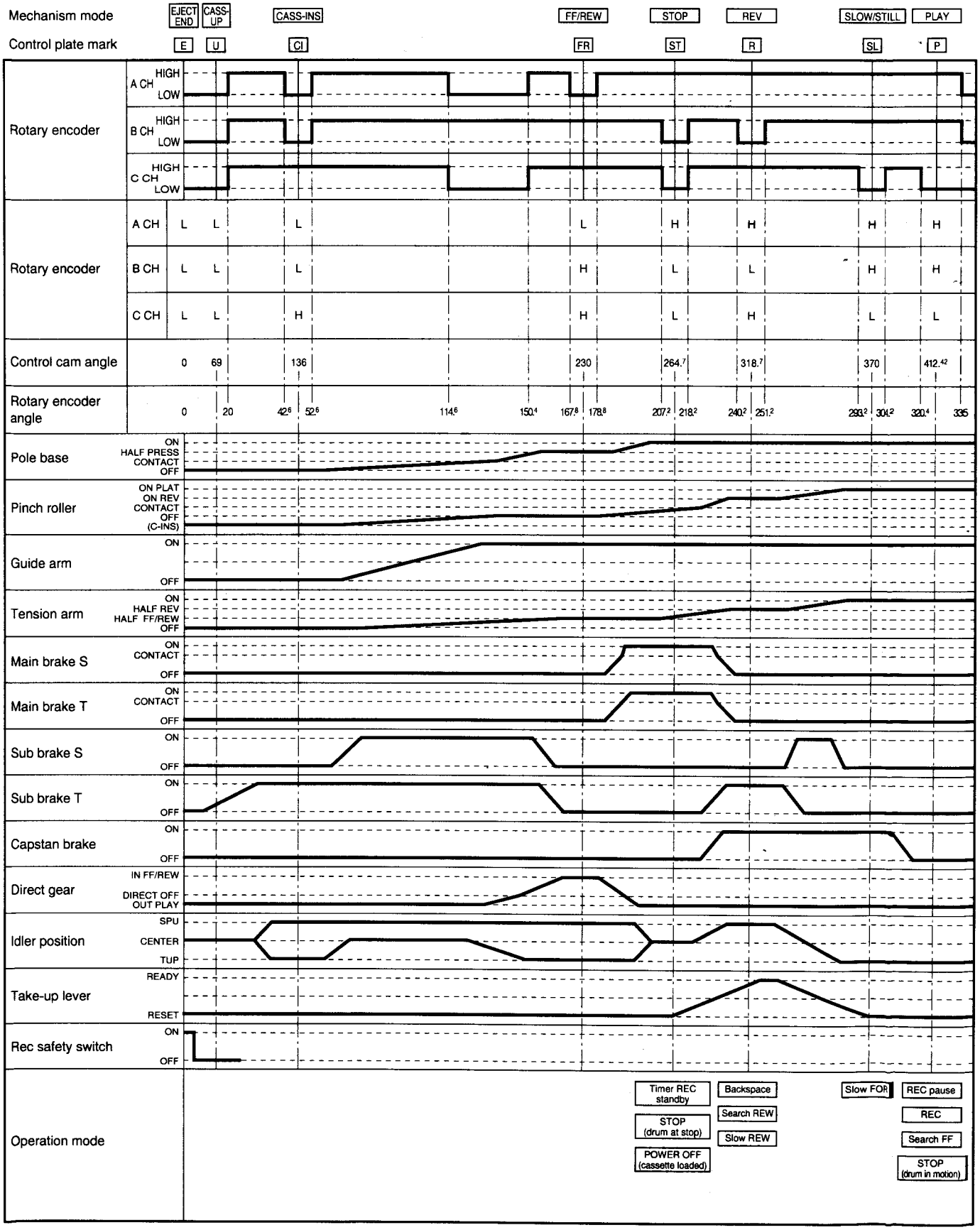
2. Install the mechanism to which the capstan motor is provisionally fastened on the bottom chassis which incorporates the Main board assembly. (No need to tighten the screws for mounting the mechanism)
   Make sure that all the connectors for the mechanism and the Main board are correctly installed.



3. Securely tighten the three screws (A), especially making sure that the connector CN3001 of the capstan motor is correctly mounted.

Note: *When the capstan motor has been replaced with a new one, perform recording in the LP mode for at least 2 minutes at normal temperatures immediately before starting the FF/REW or SEARCH operations (Aging).*

Mechanism Timing Chart



SECTION 3
ELECTRICAL ADJUSTMENT

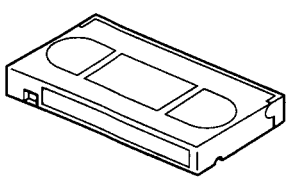
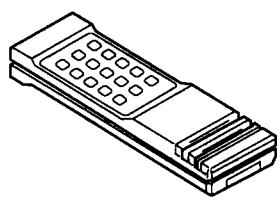
3.1 PRECAUTION

Electrical adjustment are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also do not attempt these adjustments unless the proper equipments is available.

3.1.1 Required test equipment

① Colour television or monitor
② Oscilloscope: wide-band,dual-trace,triggered delayed sweep
③ Frequency counter
④ Digital voltmeter
⑤ Signal generator: RF/IF sweep/maker
⑥ Signal generator: PAL colour bar, stairstep
⑦ Recording tape
⑧ Numeric-key remote controller(provided)

3.1.2 Required adjustment tools

Alignment tape (SP,stairstep) MHPE	Presetting unit PTU94008
	

3.1.3 Colour bar signal,colour bar pattern

● PAL colour bar signal

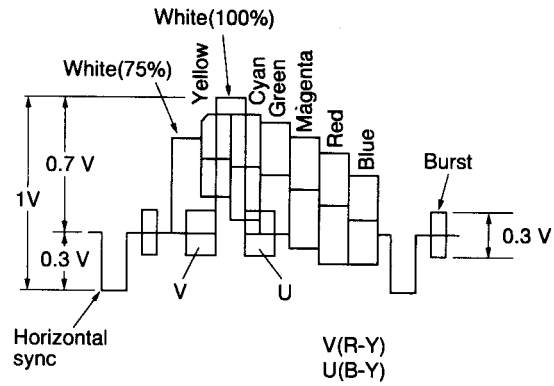


Fig.3-1-1 PAL colour bar signal waveform

● PAL colour bar pattern

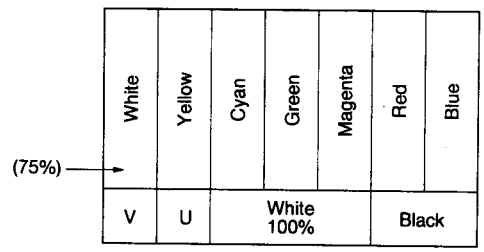


Fig.3-1-2 PAL colour bar pattern

Note:

The system control circuit of this model has an automatic recognition about the ON-OFF control of the ***DOCTOR SYSTEM.***

3.2 SERVO CIRCUIT

Notes: • *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*
• *Set VCR to the mode A by remote controller.*
• *Use only buttons "O", depressing other buttons during adjustment may cause adjustment errors.*

3.2.1 PB switching point

Signal	• Alignment tape [MHPE],Stairstep
Mode	• PB
Equipment	• Oscilloscope
Measurement point	• J7101-pin 19(VIDEO OUT)
Trigger slope (-)	• TP111(DRUM FF)
Adjustment tool	• Presetting unit [PTU94008]
Specification	• 6.5 ± 0.5H

(1) Connect an oscilloscope to J7101-pin19 (VIDEO OUT) and external trigger from TP111 (negative slope).
(2) Playback the stairstep signal of the alignment tape.
(3) Press the "O" button of the presetting unit.
(4) The adjustment is performed automatically.
Once the adjustment is performed, the VCR will go into the STOP mode.

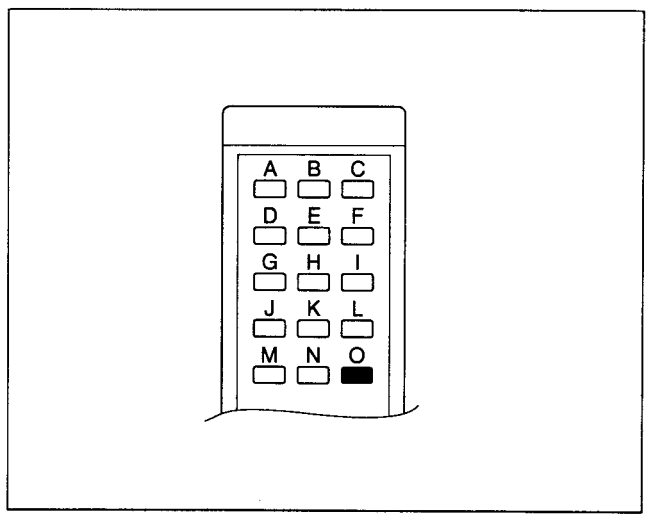


Fig.3-2-1 Presetting unit

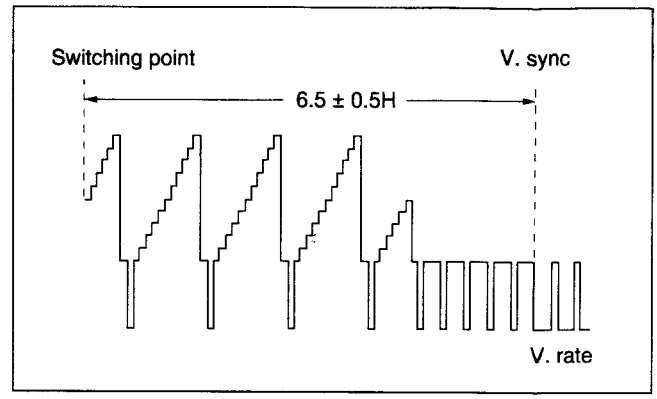


Fig.3-2-2 PB switching point

3.2.2 Slow tracking preset

Signal	• Colour bar (PAL)
Mode	• SP/LP: REC → PB(SLOW)
Equipment	• TV-Monitor
Adjustment tool	• Presetting unit [PTU94008]
Specification	• Minimum noise

Note : *Set VCR to the mode A by remote controller. Use only buttons "B" and "C", depressing other buttons during adjustment may cause adjustment errors.*

(1) Record a colour bar signal in the SP mode.
(2) Playback recorded signal on the FWD slow mode.
(3) Observe the display on the TV monitor and adjust for optimum noise condition (best tracking) by depressing "B " or "C" buttons of the presetting unit.
(4) Depress the STOP button.
(5) Confirm that the bar noise is not visible on the TV monitor in the slow mode.
(6) Record a colour bar signal in the LP mode.
(7) Repeat steps (2) to (5) in the FWD slow mode.
(8) Repeat steps (2) to (5) in the REV slow mode.

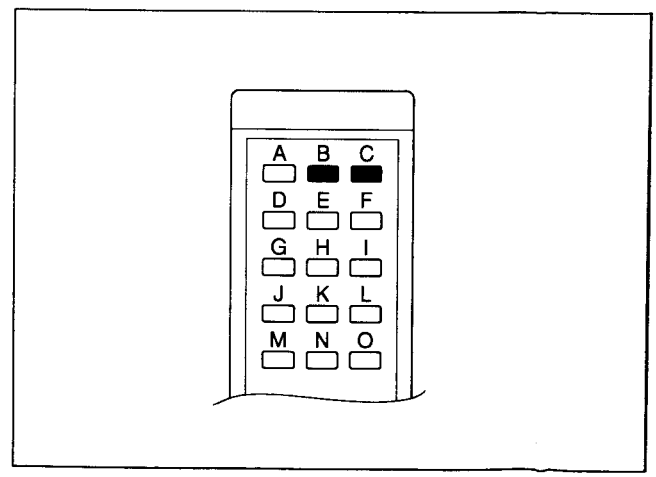


Fig.3-2-3 Presetting unit

3.3 VIDEO CIRCUIT

Notes: • *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*

• *Set VCR to the mode A by remote controller.*

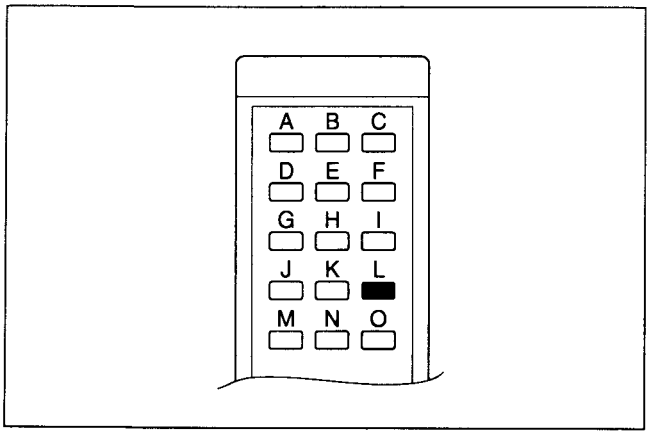


Fig.3-3-1 Presetting unit

3.3.1 Auto picture

Signal	• Monoscope
Mode	• REC then PB • SP/LP • BEST: OFF
Adjustment tool	• Presetting unit[PTU94008]
Specification	• STOP mode

(1) Set B.E.S.T feature to OFF on MENU screen.
(2) Record a monoscope signal in the SP mode.
(3) Playback the recorded signal.
(4) Press the "L" button of the presetting unit during playback.
(5) Confirm that VCR will go into the STOP mode.
(6) Repeat steps (2) to (5) in the LP mode.

3.4 SYSCON CIRCUIT

Notes: • *Unless otherwise specified,all measurement point and adjustment parts are located on the MAIN BOARD.*

• *When perform this adjustment,remove the MECHANISM assembly.*

3.4.1 Timer clock

Signal	• No signal
Mode	• EE
Equipment	• Frequency counter
Measurement point	• TL3001 round (SYS. CLK)
Adjustment part	• C3018 (TIMER CLOCK)
Specification	• 1024.008 ± 0.001 Hz [976.5549 ± 0.0010 µsec.]

(1) Connect the frequency counter to TL3001(SYS.CLK) round and GND.
(2) Connect the short wire between TL3003(TEST) round and Vcc(5V).
(3) Short the leads of capacitor C3015 once in order to reset the IC3001.
(4) Disconnect the short wire between TL3003 and !Vcc then connect it again quickly.
(5) Adjust the C3018 trimmer capacitor so that the output from TL3001(SYS.CLK) falls within the 1024.008 ± 0.001 Hz (976.5549 ± 0.0010 µsec.) range.

3.5 DEMODULATOR CIRCUIT (HR-J758E ONLY)

Note: *Unless otherwise specified, all measurement points and adjustment parts are located on the DEMODULATOR BOARD.*

3.5.1 Stereo Separation

Signal	• Sweep generator output (90 dBµ, 1 kHz)
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• CN6701-pin 8
Adjustment part	• VR6701 (SEPARATION 1)
Specification	• Minimum level

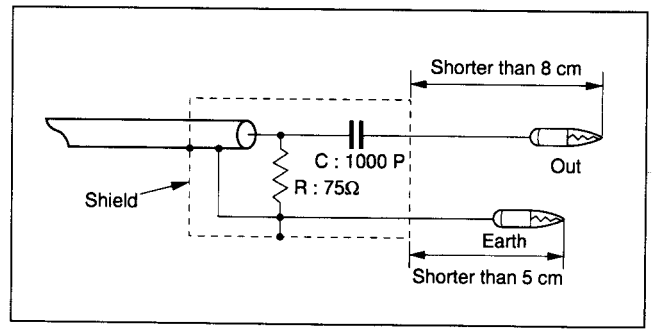


Fig. 3-5-1 Sweeper probe

(1) Use a sweeper probe as shown in Fig. 3-5-1.
(2) Supply 1 kHz R-only modulated IF signal to IF terminal of U/V tuner (front end).
(3) Connect an oscilloscope to CN6701-pin 8.
(4) Adjust VR6701 for minimum output level.

3.6 ON SCREEN CIRCUIT

Notes: • *Unless otherwise specified, all measurement point and adjustment parts are located on the MAIN BOARD.*
• *Set VCR to the mode A by remote controller.*

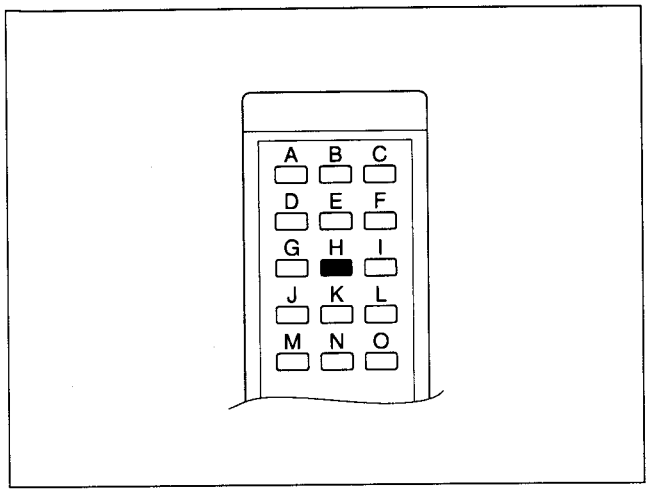


Fig.3-6-1 Presetting unit

3.6.1 Character position

Signal	• No signal
Mode	• EE
Equipment	• TV-monitor
Adjustment tool	• Presetting unit
Specification	• Character centre

(1) Press the MENU button and display the on screen character.
(2) Adjust "H" button on the presetting unit so that the character is centre position.

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

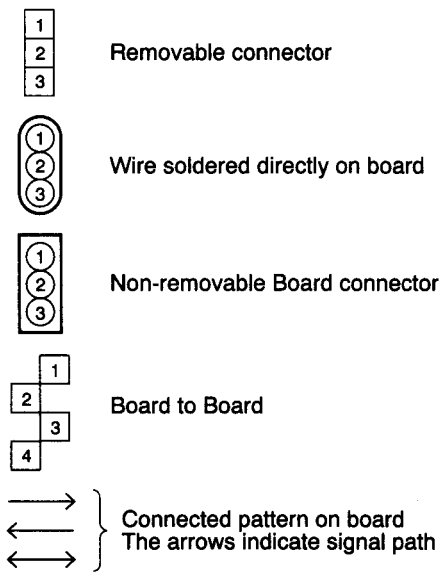
1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or IN4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

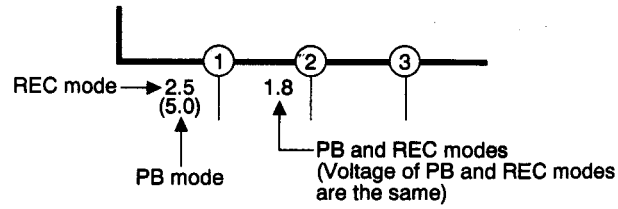
$\overline{\text{AUX}}$ or AUX(L) : Active at low

3. Interpreting Connector indications



4. Voltage measurement

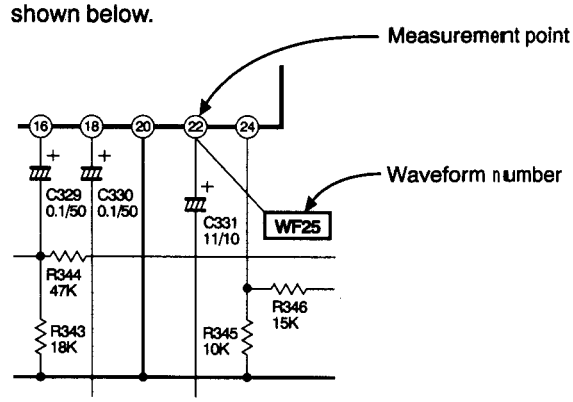
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



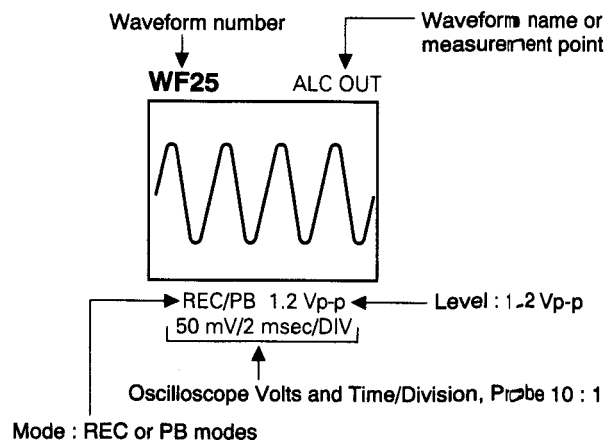
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.



5) Waveform indications



6. Signal path Symbols

The arrows indicate the signal path as follows.

Playback signal path

Playback and recording signal path

Recording signal path
(including E-E signal path)

Capstan servo path

Drum servo path

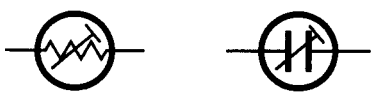
(Example)

R-Y Playback R-Y signal path

Y Recording Y signal path

7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

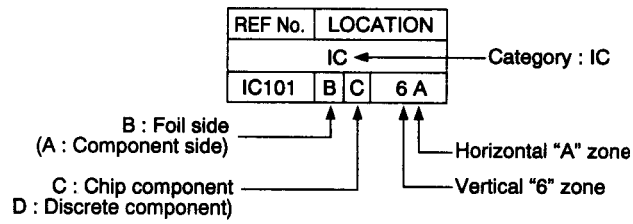
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

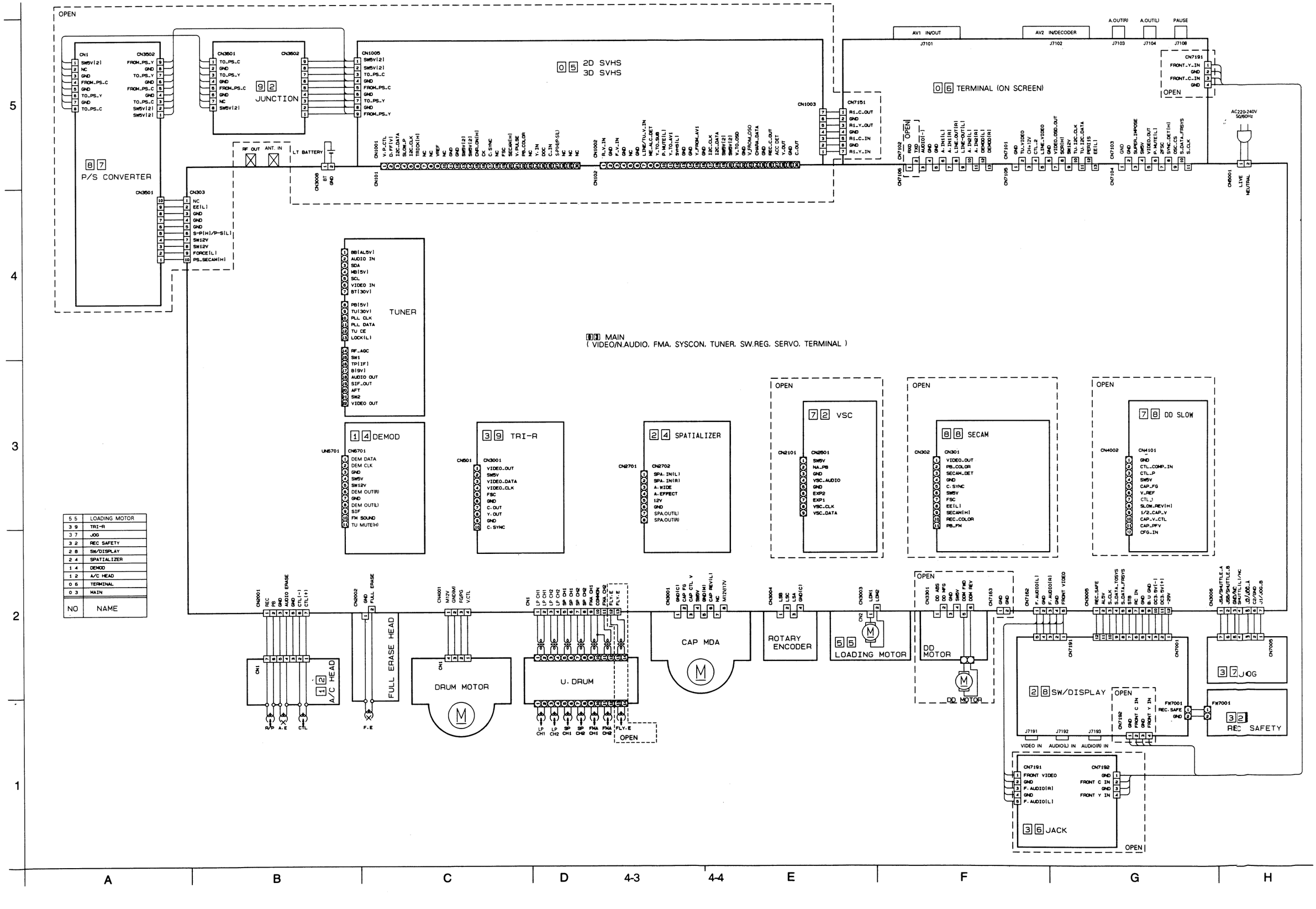
Parts location are indicated by guide scale on the circuit board.



Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

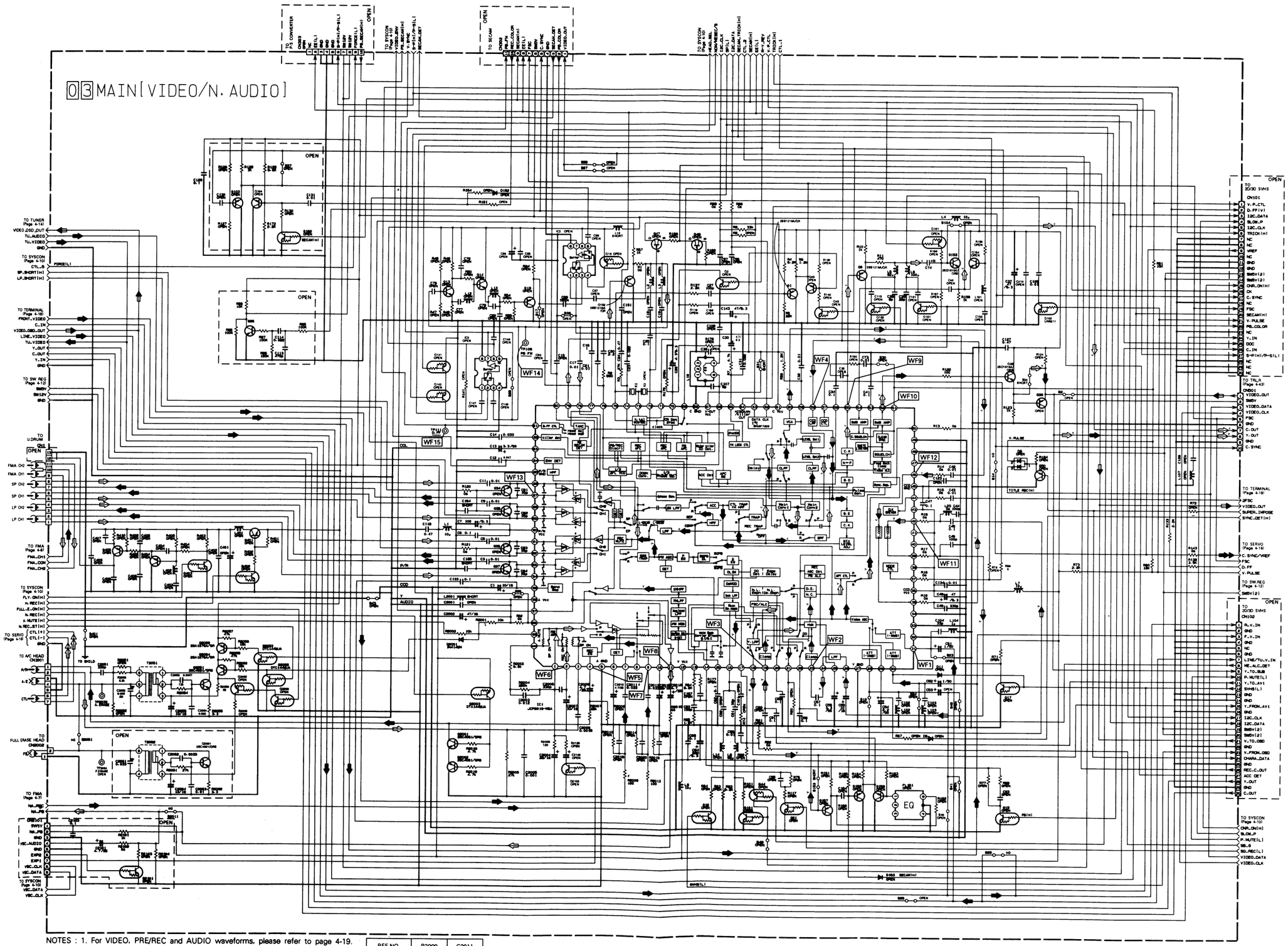
4.1 BOARD INTERCONNECTIONS



55	LOADING MOTOR
39	TRI-R
37	JOG
32	REC SAFETY
28	SW/DISPLAY
24	SPATIALIZER
14	DEMOD
12	A/C HEAD
06	TERMINAL
03	MAIN

NO	NAME

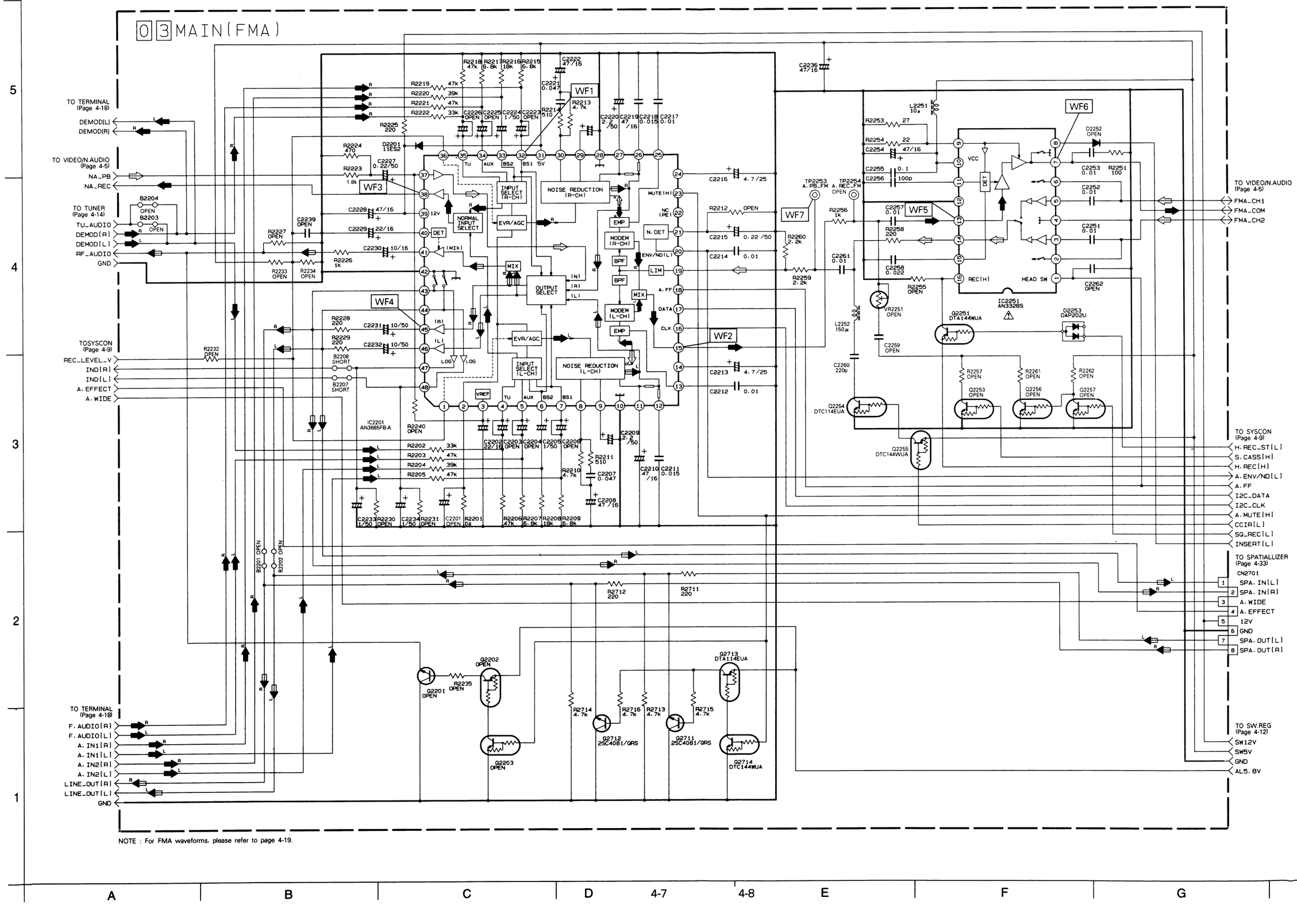
4.2 VIDEO/N.AUDIO SCHEMATIC DIAGRAM



NOTES : 1. For VIDEO, PRE/REC and AUDIO waveforms, please refer to page 4-19.
2. Comparison chart of models & marks (#).

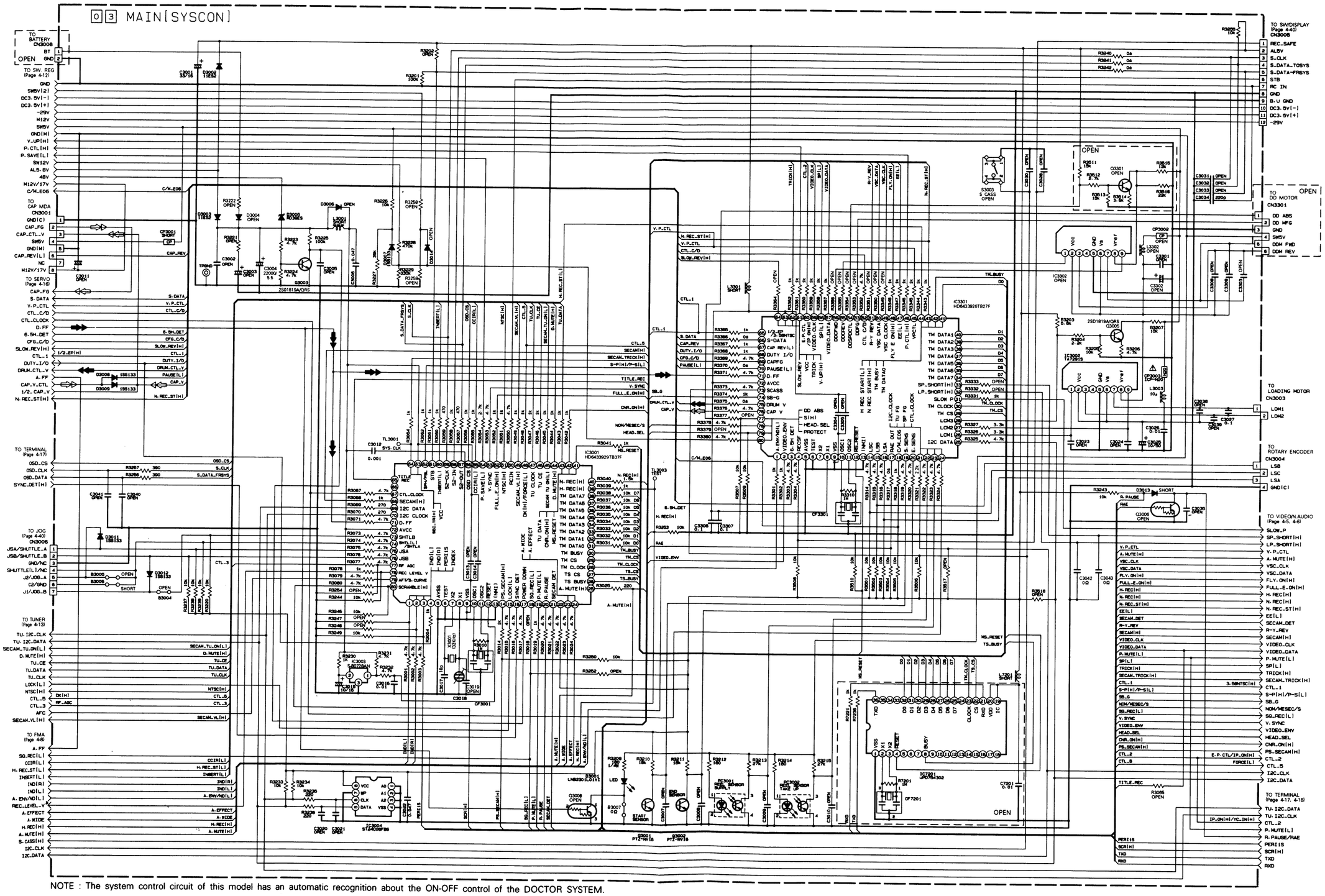
MODEL	REF.NO.	R2009	C2011
	HR-J758E	NOT USED	NOT USED
	HR-J758EH	USED	USED

4.3 FMA SCHEMATIC DIAGRAM

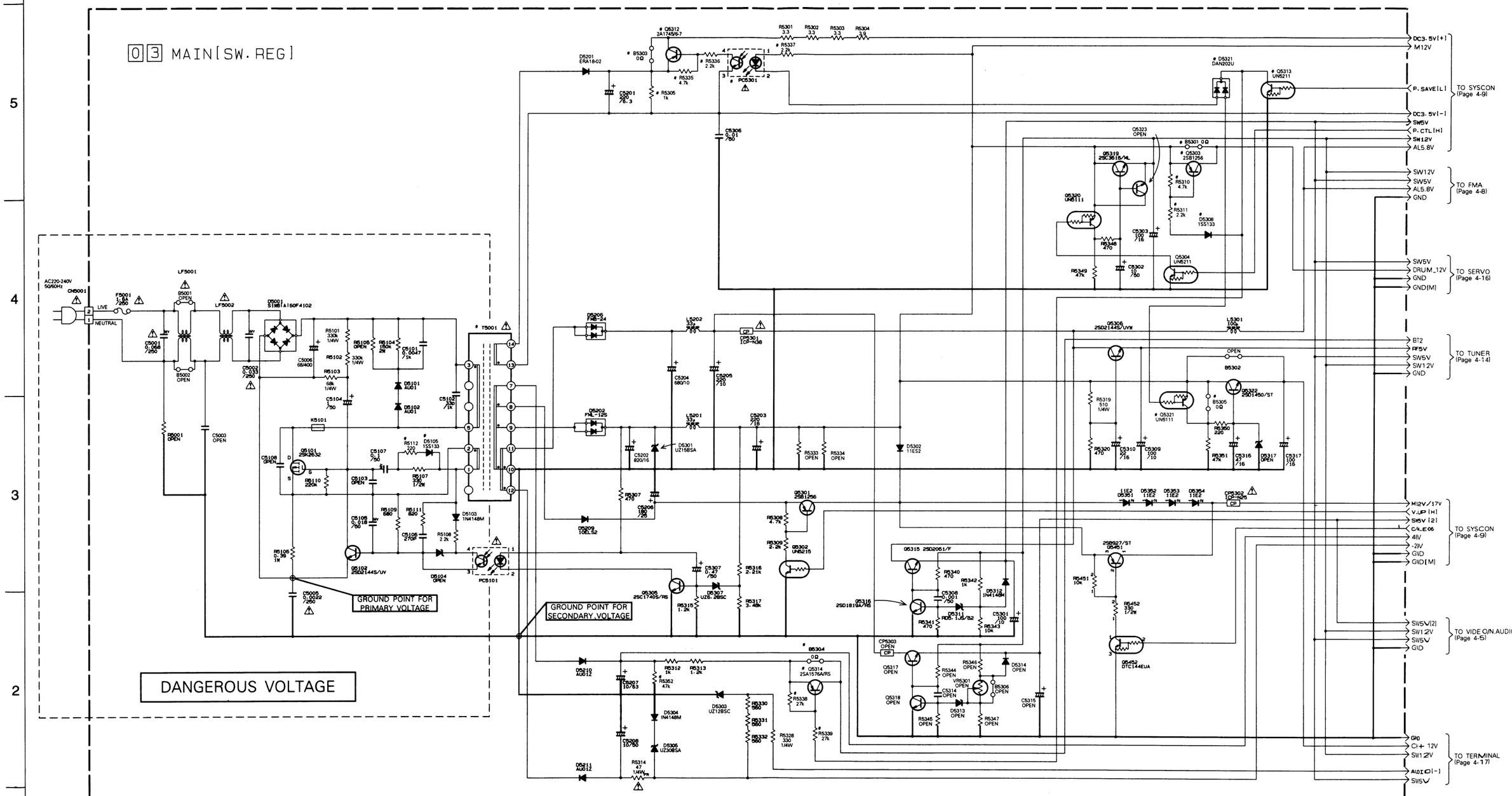


NOTE : For FMA waveforms, please refer to page 4-19.

4.4 SYSCON SCHEMATIC DIAGRAM


03 MAIN[SYSCON]
TO BATTERY CN3008
TO SW. REG (Page 4-12)
TO CAP MDA CN3001
TO SERVO (Page 4-16)
TO TERMINAL (Page 4-17)
TO JOG (Page 4-40) CN3005
TO TUNER (Page 4-13)
TO FMA (Page 4-8)
TO SW/DISPLAY (Page 4-40) CN3005
TO DD MOTOR CN3301
TO LOADING MOTOR CN3003
TO ROTARY ENCODER CN3004
TO VIDEO/N AUDIO (Page 4-5, 4-6)
TO TERMINAL (Page 4-17, 4-18)
IC3001 HD6433929T83F
IC3301 HD6433926T82F
IC7201 UPD754302
IC3002 ST24C08FB6
IC3003 S-80728AN
S3003 S.CASS OPEN
OPEN
SHORT
2SD1819A/QRS
NOTE : The system control circuit of this model has an automatic recognition about the ON-OFF control of the DOCTOR SYSTEM.

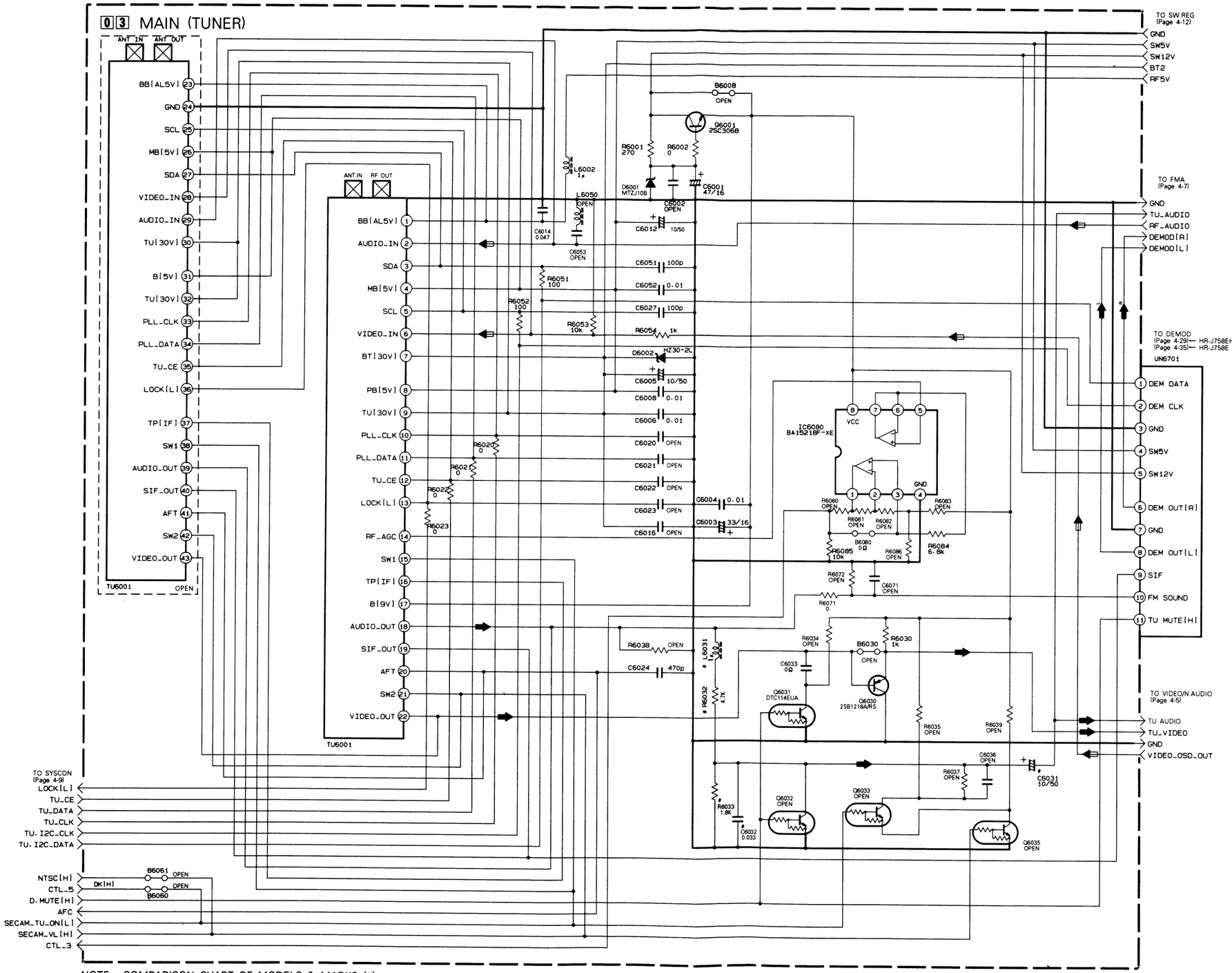
4.5 SWITCHING REGULATOR SCHEMATIC DIAGRAM



NOTE : COMPARISON CHART OF MODELS & MARKS (#).

REF.NO.		Q5303,Q5321 Q5312-Q5314	D5105,D5308 D5321	R5112,R5305,R5310,R5311 R5335-R5339,R5352	T5001	PC5301	B5301 B5303-B5305
MODEL	HR-J758E	USED	USED	USED	QQS0027-001	USED	NOT USED
	HR-J758EH	NOT USED	NOT USED	NOT USED	QQS0021-001	NOT USED	USED

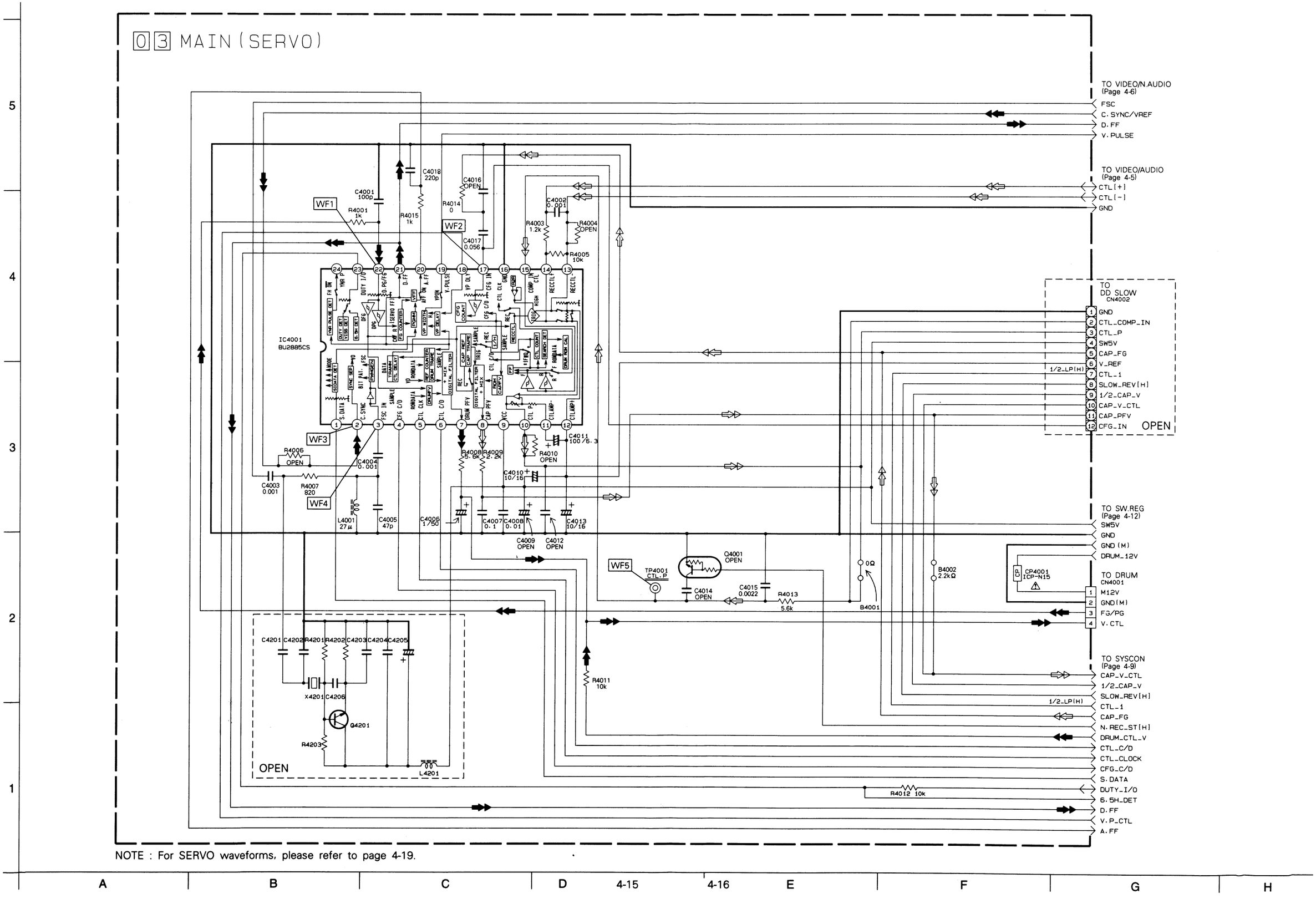
4.6 TUNER SCHEMATIC DAIGRAM



NOTE : COMPARISON CHART OF MODELS & MARKS (#).

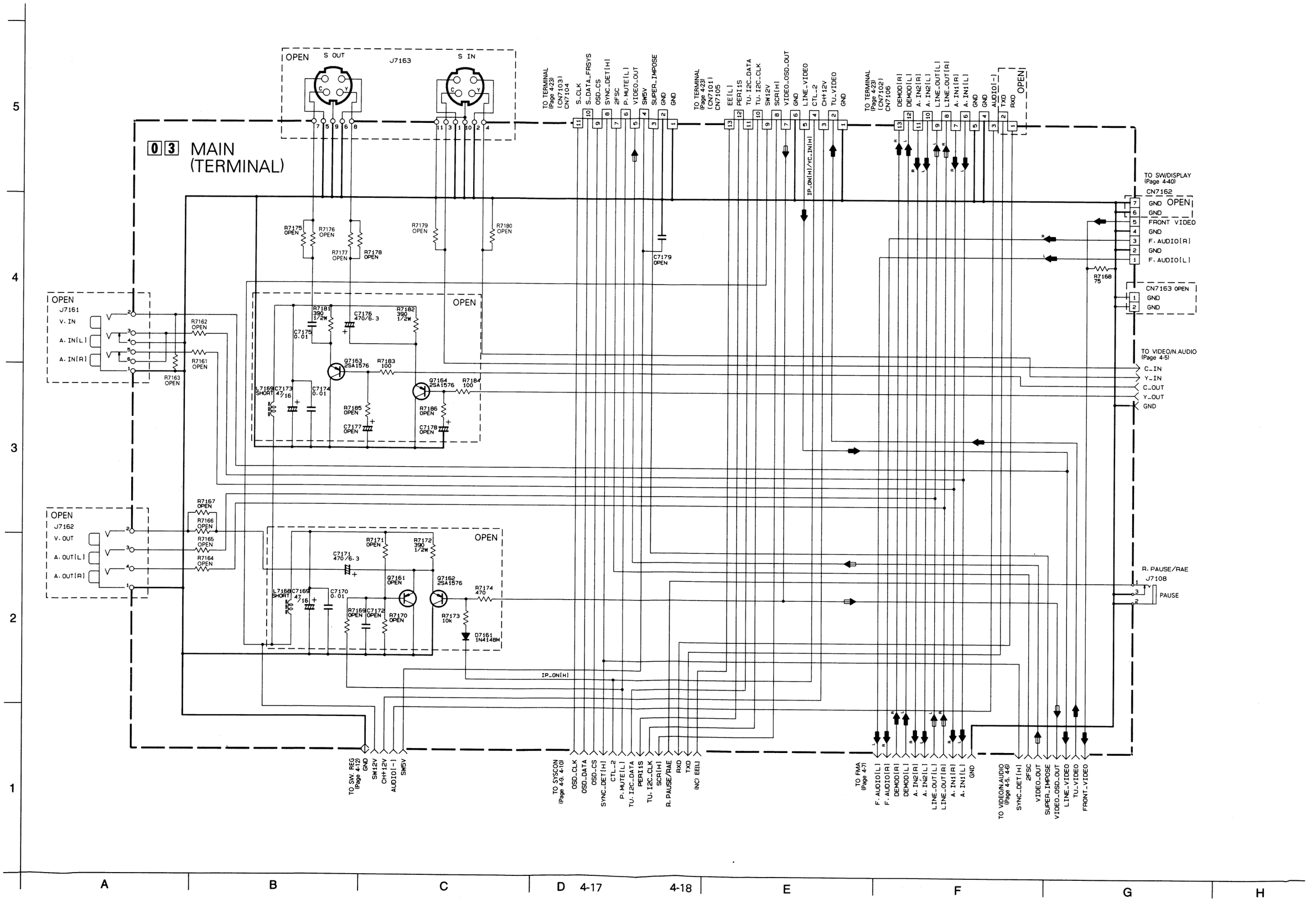
REF.NO.		R6032 R6033	C6031 C6032	L6031
MODEL	HR-J758E	NOT USED	NOT USED	NOT USED
	HR-J758EH	USED	USED	USED

4.7 SERVO SCHEMATIC DIAGRAM



NOTE : For SERVO waveforms, please refer to page 4-19.

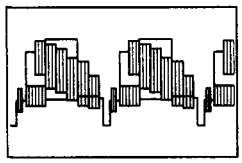
4.8 TERMINAL MAIN SCHEMATIC DAIGRAM



WAVEFORMS

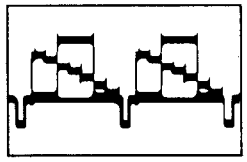
— VIDEO/N.AUDIO —

WF1 IC1-31



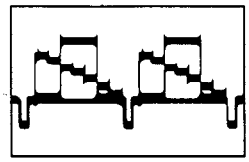
REC 1.0 Vp-p
50 mV/20 µsec/DIV

WF2-1 IC1-23



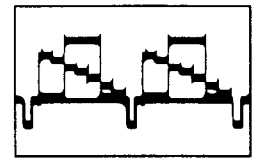
REC 0.46 Vp-p
20 mV/20 µsec/DIV

WF2-1 IC1-23



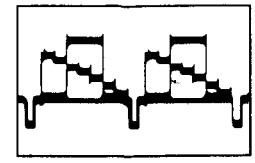
PB 0.57 Vp-p
20 mV/20 µsec/DIV

WF3-1 IC1-19



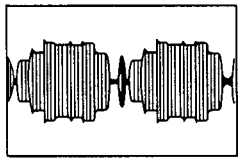
REC 0.48 Vp-p
20 mV/20 µsec/DIV

WF3-2 IC1-19



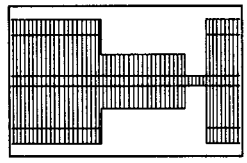
PB 0.57 Vp-p
20 mV/20 µsec/DIV

WF4-1 IC1-58



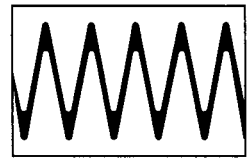
REC 0.4 Vp-p
10 mV/10 µsec/DIV

WF4-2 IC1-58



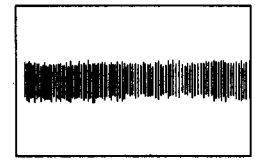
PB 0.42 Vp-p
20 mV/5 msec/DIV

WF5 IC1-4



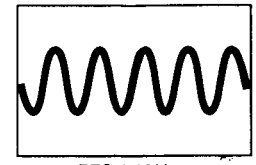
REC 0.84 Vp-p
20 mV/0.5 msec/DIV

WF6 IC1-2



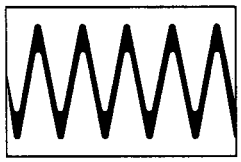
PB 2.5 mVp-p
5 mV/5 msec/DIV

WF7 IC1-9



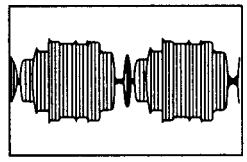
REC 0.12 Vp-p
5 mV/1 msec/DIV

WF8 IC1-11



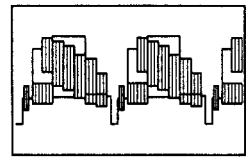
PB 0.68 Vp-p
20 mV/0.5 msec/DIV

WF9 IC1-55



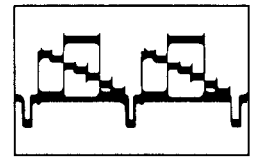
PB 0.62 Vp-p
20 mV/20 µsec/DIV

WF10-1 IC1-52



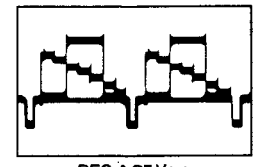
REC 2.2 Vp-p
50 mV/20 µsec/DIV

WF10-2 IC1-52



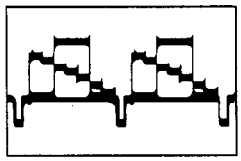
PB 2.2 Vp-p
0.1 V/20 µsec/DIV

WF11-1 IC1-42



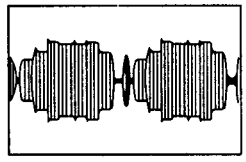
REC 0.37 Vp-p
10 mV/20 µsec/DIV

WF11-2 IC1-42



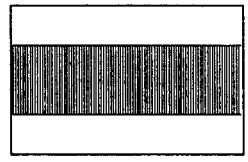
PB 0.47 Vp-p
20 mV/20 µsec/DIV

WF12 IC1-46



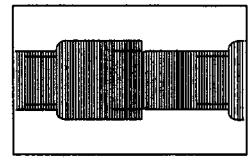
REC/PB 0.25 Vp-p
10 mV/20 µsec/DIV

WF13 IC1-87



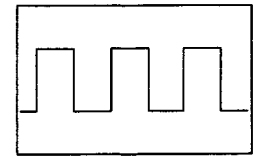
REC 1.5 Vp-p
50 mV/1 msec/DIV

WF14 TP106 PB FM



PB 0.4 Vp-p
10 mV/2 msec/DIV

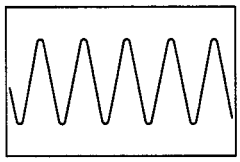
WF15 TP111 D.FF



REC/PB 5.2 Vp-p
0.2 V/10 msec/DIV

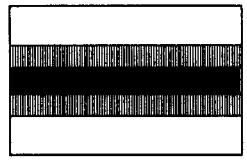
— FMA —

WF1 IC2201-32



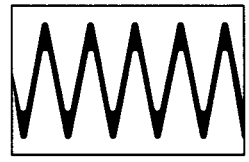
REC 0.1 Vp-p
2 mV/0.5 msec/DIV

WF2 IC2201-15



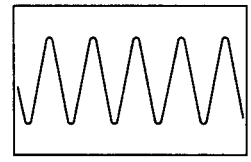
REC 0.28 Vp-p
10 mV/1 msec/DIV

WF3 IC2201-38



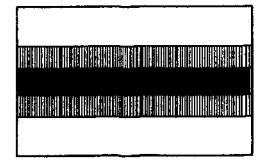
REC 0.12 Vp-p
2 mV/0.5 msec/DIV

WF4 IC2201-45



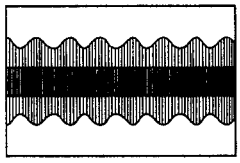
REC/PB 1.1 Vp-p
20 mV/0.5 msec/DIV

WF5 IC2251-13



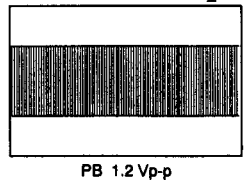
REC 0.25 Vp-p
10 mV/1 msec/DIV

WF6 IC2251-7



REC 2.1 Vp-p
50 mV/2 msec/DIV

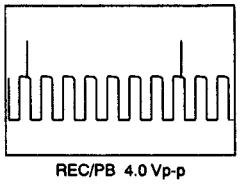
WF7 TP2253 A.PB_FM



PB 1.2 Vp-p
50 mV/5 msec/DIV

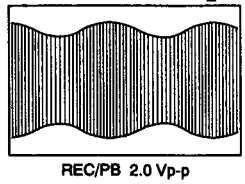
— SERVO —

WF1 IC4001-22 D.PG/FG



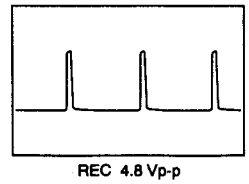
REC/PB 4.0 Vp-p
0.1 V/5 msec/DIV

WF2 IC4001-17 CAP_FG



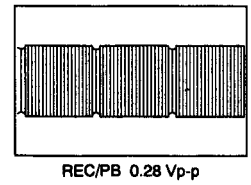
REC/PB 2.0 Vp-p
50 mV/10 msec/DIV

WF3 IC4001-2 C.SYNC



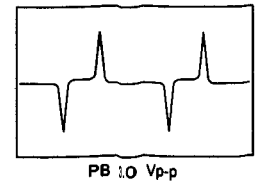
REC 4.8 Vp-p
0.2 V/20 µsec/DIV

WF4 IC4001-3 FSC



REC/PB 0.28 Vp-p
10 mV/5 msec/DIV

WF5 TP4001 CTL.P



PB 1.0 Vp-p
0.1 V/10 msec/DIV

COMPONENT PARTS LOCATION GUIDE <MAIN>

CAPACITOR

REF.NO.	LOCATION
C1	A D 15J
C3	A D 17J
C5	A D 17J
C6	A D 17H
C7	A B 18J
C9	A B 17H
C11	B B 18J
C12	B B 17H
C13	B B 18H
C14	B B 18H
C15	B B 18H
C16	B B 19G
C17	B B 19F
C18	B B 20F
C19	B B 19F
C20	B B 19G
C21	B B 19H
C23	B B 18G
C24	B B 18G
C25	B B 19F
C27	B B 19D
C29	B B 18G
C30	B B 18F
C31	B B 17F
C32	B B 16E
C34	B B 17F
C35	B B 16F
C36	B B 17F
C37	B A 20C
C38	B A 18D
C39	B B 18C
C40	B B 17E
C41	B B 17E
C42	B B 16F
C43	B B 15F
C44	B B 16F
C45	B B 15E
C46	B B 16E
C47	B B 15F
C48	B A 15F
C49	B B 15F
C51	A A 14F
C52	A A 13G
C53	A A 12G
C54	A A 12G
C55	A A 13G
C56	A A 12G
C57	A B 15H
C58	A B 15H
C59	A B 15H
C60	A B 14I
C61	A B 12H
C62	A B 14I
C63	A B 13J
C64	A B 13I
C65	A B 13I
C73	A B 19E
C74	A B 19C
C76	A B 19E
C77	A B 19E
C78	A B 19E
C79	A B 19E
C80	A B 19E
C81	B B 18B
C82	B B 17I
C83	B B 17J
C84	B B 17J
C85	B A 20F
C86	B A 20F
C87	B B 18F
C88	B B 18F
C89	B B 18F
C90	B B 18H
C91	A B 14I
C92	A B 12H
C93	A B 13J
C96	A B 17F
C97	A B 17F
C98	A B 13I
C99	A B 13H
C101	A B 12H
C102	A B 13G
C103	A B 14G
C104	A B 14F
C105	A B 19C
C107	A B 17F
C108	A B 17F
C113	A B 21C
C114	A B 21C
C115	A B 18D
C116	A B 19I
C127	A B 20D
C128	A B 8N
C129	A B 8N
C130	A B 8N
C131	A B 9M
C133	A B 15J
C134	A B 15G
C141	A B 20E
C143	A B 7A
C146	A B 18E
C147	A B 17D
C148	A B 18D
C153	A B 19D
C154	A B 13H
C164	A B 19D
C165	A B 20G
C167	A B 14H
C181	A B 18C
C191	A B 18E
C201	A B 15N
C202	A B 15N
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C204	A B 14N
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C206	A B 14N
C207	A B 14N
C208	A B 15N
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C212	A B 15O
C213	A B 15O
C215	A B 13N
C258	A B 14O
C281	A B 13M
C282	A B 14M
C401	A B 15K
C402	A B 15K
C403	A B 16K
C404	A B 16K
C405	A B 16K
C406	A B 16K
C407	A B 16K
C408	A B 16K
C409	A B 16K
C2001	A B 14J
C2002	A B 14J
C2003	A B 16I
C2004	A B 14K
C2005	A B 14K
C2006	A B 16I
C2007	A B 14J
C2008	A B 16I
C2009	A B 14J
C2010	A B 14I
C2011	A B 16I
C2013	A B 15I
C2015	A D 13J
C2016	A D 13J
C2018	B B 15I
C2020	B C 15I
C2021	B C 13J
C2051	B C 10J
C2052	B C 10K
C2053	B C 11K
C2054	B C 11K
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C2061	A D 11J
C2062	B C 11J
C2063	B C 11K
C2064	A D 12K
C2101	A A 11M
C2102	A A 14K
C2103	A B 15L
C2201	A A 16M
C2202	A B 15L
C2203	A A 16L
C2204	A A 16L
C2205	A A 16L
C2206	A A 16L
C2207	A B 16L
C2208	A A 16K
C2209	A D 17L
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C2211	A B 17L
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C2213	A B 17L
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C2215	A B 18L
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C2217	A B 19M
C2218	A B 19M
C2219	A B 19M
C2220	A B 19M
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C2222	A B 19M
C2223	A A 18N
C2224	A A 18N
C2225	A B 18M
C2226	A A 18N
C2227	A A 17N
C2228	A A 17N
C2229	A A 16N
C2230	A A 16N
C2231	A A 17M
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C2234	A A 16M
C2236	A A 19N
C2239	A B 15L
C2251	B B 17J
C2252	B B 18J
C2253	B B 18J
C2254	B A 18K
C2255	B B 18K
C2256	B B 17K
C2257	B B 17K
C2260	B B 19L
C2259	B B 19L
C2261	B B 19L
C2262	B B 17J
C3001	B A 8B
C3002	B A 5B
C3003	B A 5B
C3004	A B 5B
C3005	B C 5A
C3006	B B 16D
C3007	B C 4D
C3008	B B 20E
C3009	B B 17A
C3010	B B 9B
C3011	B A 7G
C3012	B C 16D
C3013	B A 16C
C3014	B C 16C
C3015	A B 13E
C3016	B B 14D
C3017	A B 14F
C3018	A B 14E
C3019	B B 14E
C3020	B B 20C
C3021	B B 20C
C3022	B B 20C
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C3025	A C 7H
C3026	B B 7H
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C3031	B B 3B
C3032	B B 3B
C3033	B B 3B
C3034	B B 3B
C3035	B B 9B
C3038	B B 8I
C3039	B B 8I
C3040	B B 7B
C3041	B B 7B
C3042	B B 11B
C3043	B B 11B
C3301	B B 13F
C3302	B B 13F
C3303	A B 14G
C3304	B B 10E
C3305	B A 9E
C3306	B B 9D
C3307	B B 10F
C3308	B B 12G
C3309	B B 13G
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C4002	B B 9J
C4003	B B 12I
C4004	B B 11I
C4005	B B 11I
C4006	A C 10H
C4007	B B 10H
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C4009	A C 10H
C4010	A A 10H
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C5002	A A 3N
C5003	A A 5P
C5005	A A 2M
C5006	A A 3M
C5101	A A 3K
C5102	A A 2J
C5103	A A 2K
C5104	A A 3L
C5105	A A 2L
C5106	A A 3L
C5107	A A 2K
C5108	A A 2K
C5201	A A 1H
C5202	A A 3H
C5203	A D 4F
C5204	A D 2F
C5205	A D 2F
C5206	A A 4H
C5207	A D 4H
C5208	A D 2H
C5301	A D 3D
C5302	A D 3E
C5303	A D 4D
C5306	B C 1F
C5307	A C 4F
C5308	B C 22M
C5309	A D 2C
C5310	C C 1C
C5314	B C 2C
C5315	A D 2B
C5316	A D 1E
C5317	A D 1M
C6001	A B 21M
C6002	A B 21L
C6003	A C 21I
C6004	B C 20I
C6005	A C 20O
C6006	B C 21N
C6008	B C 21L
C6012	A C 20O
C6014	B C 21P
C6016	B C 21K
C6020	B C 21K
C6021	B C 21K
C6022	B C 21K
C6023	B C 21K
C6024	B C 22I
C6027	A C 22O
C6031	A C 20I
C6032	B C 21J
C6033	B C 21H
C6036	B C 21L
C6051	B C 21O
C6052	B C 21O
C6053	B C 21O
C6071	A C 22I
C7169	B C 16P
C7170	B C 16O
C7171	B C 15P
C7172	B C 16O
C7173	B C 15P
C7174	B C 10P
C7175	B C 8P
C7176	B C 6P
C7177	B C 8P
C7178	B C 6P
C7179	B C 10O
C7201	B C 11B

CONNECTOR

REF.NO.	LOCATION
CN1	A D 15K
CN3	A D 12M
CN101	A D 13N
CN102	A D 10N
CN302	A D 7M
CN303	A D 20N
CN501	A D 7N
CN2001	A D 10J
CN2002	A D 20G
CN2101	A D 11L
CN2701	A D 13M
CN3001	A D 8H
CN3003	A D 6J
CN3004	A D 10A
CN3005	A D 3A
CN3006	A D 3C
CN3008	A D 17P
CN3301	A D 14H
CN4001	A D 6L
CN4002	A D 9M
CN5001	A D 1P
CN7104	A D 13P
CN7105	A D 13P
CN7106	A D 19P
CN7162	A D 21A
CN7163	A D 20B

CIRCUIT PROTECTOR

REF.NO.	LOCATION
CP3001	A D 8G
CP3002	A D 13F
CP3003	A D 7H
CP4001	A D 6F
CP5301	A D 5E
CP5302	A D 5G
CP5303	A D 2C

DIODE

REF.NO.	LOCATION
D6	A D 14G
D11	A D 15G
D152	A D 9K
D153	A D 14H
D201	A D 14N
D202	A D 14N
D2001	A D 14J
D2201	A D 18N
D2252	A D 20B
D2253	A B 18L
D3001	A D 13D
D3002	A D 5C
D3003	A D 5B
D3004	A D 5C
D3005	A D 6B
D3006	A D 6B
D3007	A D 8D
D3008	A D 8F
D3009	A D 6F
D3011	A D 3C
D3012	A D 3B
D3013	A D 8B
D3014	A D 6E
D5001	A B 3N
D5101	A D 3K
D5102	A D 3J
D5103	A D 4M
D5104	A D 3L
D5105	A A 1K
D5201	A A 1I
D5202	A A 4H
D5206	A A 2H
D5209	A D 3H
D5210	A A 3H
D5211	A A 3H
D5301	A A 3G
D5302	A A 4F
D5303	A A 1B
D5304	A D 1F
D5305	A A 2F
D5307	A A 3I
D5308	A A 4E
D5311	A D 2D
D5312	A D 3D
D5313	A A 2B
D5314	A D 2B
D5317	A D 1D
D5321	A A 1E
D5351	A A 4F
D5352	A D 5F
D5353	A D 5F
D5354	A D 4G
D6001	A D 20M
D6002	A D 20O
D7161	A D 16P

IC

REF.NO.	LOCATION
IC1	B C 16H
IC2	B C 18F
IC3	B C 18D
IC201	A D 15N
IC2201	A D 17M
IC2251	B C 17K
IC3001	A D 15D
IC3002	B C 6H
IC3003	B C 14E
IC3004	A D 20C
IC3301	B C 10D
IC3302	A D 12G
IC4001	B C 11I
IC6080	B C 22M
IC7201	B C 12C

JACK

REF.NO.	LOCATION
J7108	A D 20P
J7161	A D 13P
J7162	A D 14P
J7163	A D 8P

COIL

REF.NO.	LOCATION
L1	A D 19I
L2	A D 20F
L3	A D 19F
L4	A D 20F
L5	A D 18D
L6	A D 18D
L7	A D 14F
L8	A D 12H
L9	A D 13I
L12	A D 18E
L13	A D 18E
L14	A D 12I
L16	A D 20F
L18	A D 17G
L29	A D 15F
L102	A D 13G
L103	A D 14G
L104	A D 14F
L107	A D 16K
L151	A D 19D
L202	A D 16O
L203	A D 15N
L252	A D 13O
L401	A D 14K
L402	A D 16K
L2001	A D 14J
L2251	A D 18J
L2252	A D 19L
L3001	A D 6B
L3003	A D 7H
L3301	A D 13J
L3302	A D 13F
L4001	A D 11I
L4201	A D 11H
L5201	A D 3G
L5202	A D 2E
L5301	A D 2D
L6002	A D 21P
L6031	A D 20J
L6050	A D 21O
L7168	A D 16O
L7169	A D 10P
L7201	A D 9B

TRANSISTOR

REF.NO.	LOCATION
Q1	B C 19E
Q2	B C 18G
Q6	B C 17E
Q13	B B 19E
Q14	B C 19E
Q15	B B 19E
Q16	B C 19E
Q17	B C 12I
Q18	B C 12I
Q19	B C 12J
Q21	B C 13H
Q26	B C 21B
Q34	B B 18J
Q35	B C 17I
Q36	B C 17I
Q37	B C 17I
Q38	B C 19D
Q39	B C 19C
Q44	B B 12H
Q45	B C 19E
Q46	B C 18D
Q47	B C 18G
Q48	B C 18C
Q101	B C 8N
Q102	B C 9M
Q103	B C 8N
Q104	B C 8N
Q141	B C 17D
Q142	B C 17D
Q152	B C 18H
Q153	B C 19D
Q154	B C 20D
Q157	B C 13H
Q158	B C 13H
Q159	B C 14H
Q160	B C 9M
Q161	B C 19C
Q162	B C 18C
Q201	B C 13K
Q202	B C 13K
Q203	B C 13K
Q2051	B C 11K
Q2052	B C 12K
Q2053	B C 13K
Q2054	B C 12K
Q2055	B C 13K
Q2061	B C 12K
Q2062	B C 12K
Q2063	B C 12K
Q2101	B C 11L
Q2102	B C 14K
Q2201	B C 17O
Q2202	B C 18O
Q2251	B C 18K
Q2253	B C 14L
Q2254	B C 19L
Q2255	B C 19L
Q2256	B C 14L
Q2257	B C 14L
Q2711	B C 14M
Q2712	B C 15L
Q2713	B C 14M
Q2714	B C 14L
Q3001	B A 5E
Q3002	B C 20E
Q3003	B C 5B
Q3005	B C 7H
Q3006	B B 9B
Q3008	B C 13D
Q3301	B B 12F
Q4001	B C 9H
Q4201	B C 11H
Q5101	B A 2L
Q5102	B A 4E
Q5301	B A 4F
Q5302	B A 4G
Q5303	B B 4F
Q5304	A B 4E
Q5305	A D 3H
Q5306	A D 2O
Q5312	B B 1H
Q5313	B B 1F
Q5314	B B 4G
Q5315	B A 2E
Q5316	B A 2D
Q5317	B A 2C
Q5318	B B 1E
Q5319	A B 4E
Q5320	B C 2E
Q5321	B B 1F
Q5322	B B 2D
Q5323	B B 3E
Q5451	A A 4E
Q5452	B C 5F
Q6001	A D 20N
Q6030	B C 22H
Q6031	B C 21H
Q6032	B C 21H
Q6033	B C 21J
Q6035	B C 22J
Q7161	B B 16P
Q7162	B C 15O
Q7163	B C 8P
Q7164	B C 7P

RESISTOR

REF.NO.	LOCATION
R1	B C 19F
R2	B B 18H
R3	B B 18G
R4	B B 19E
R5	B B 20D
R6	B B 17F
R7	B B 17F
R8	B B 17F
R9	B B 17F
R10	B B 17E
R11	B B 18D
R13	B B 16E
R14	B B 16F
R15	B B 15F
R16	B B 15F
R17	B B 15G
R18	B B 15F
R19	B B 15G
R20	B B 15H
R21	B B 13H
R22	B B 13H
R23	B B 13I
R24	B B 14I
R25	B B 13J
R46	B B 19A
R47	B B 19A
R48	B B 19A
R49	B B 19A
R50	B B 19E
R52	B B 17I
R54	B B 19E
R55	B B 19E
R56	B B 16F
R57	B B 18E
R59	B B 17E
R60	B B 12E
R61	B C 8H
R62	B B 8H
R63	B B 13H
R64	B B 13I
R65	B B 13J
R67	B B 15H
R68	B B 17E
R69	B B 17E
R71	B B 13I
R72	B B 8O
R73	B B 12E
R74	B B 12H
R75	B B 12J
R76	B B 13H
R77	B B 18F
R94	B B 21C
R95	B B 21B
R96	B B 21C
R97	B B 21C
R98	B B 21B
R99	B B 21B
R101	B B 12I
R116	B B 19G
R117	B B 13H
R120	B B 18I
R121	B B 20G
R122	B B 19C
R123	B B 19C
R124	B B 19C
R126	B B 8N
R127	B B 8N
R128	B B 7N
R129	B B 8M
R130	B B 8M
R133	B B 7J
R137	B B 19G
R138	B B 7I
R139	B B 19D
R140	B B 19D
R141	B B 18E
R143	B B 20E
R150	B B 19C
R151	B B 13H
R154	B B 13H
R156	B B 14H
R157	B B 14H
R158	B B 18G
R159	B B 19G
R161	B B 9M
R162	B B 14I
R163	B B 18F
R164	B B 15N
R165	B B 14N
R166	B B 14N
R168	B B 14O
R169	B B 15O
R172	B B 15O
R177	B B 14O
R178	B B 15O
R179	B B 15O
R201	B B 14K
R204	B B 16K
R205	B B 16K
R206	B B 16K
R208	B B 16K
R209	B B 16K
R211	B B 16K
R213	B B 16J
R226	B B 17I
R401	B B 13L
R402	B B 16I
R403	B B 16I
R404	B B 14K
R405	B B 13K
R408	B B 13J
R409	B B 15I
R410	B B 15I
R2001	B B 15I
R2002	B B 15I
R2003	B B 15L
R2004	B B 15L
R2005	B B 15L
R2006	B B 15L
R2007	B B 15L
R2008	B B 15L
R2009	B B 15L
R2010	B B 15L
R2013	B B 15L
R2014	B B 15I
R2015	B B 13K
R2016	B B 13K
R2018	B B 13K
R2019	B B 13K
R2051	B B 10K
R2052	B B 10K
R2053	B B 10K
R2054	B B 11K
R2055	B B 11K
R2056	B B 12K
R2057	B B 12K
R2058	B B 13K
R2059	B B 12K
R2060	B B 13K
R2061	B B 11J
R2062	B B 12J
R2063	B B 12J
R2101	B B 11M
R2102	B B 11L
R2103	B B 11L
R2104	B B 11L
R2105	B B 14K
R2201	B B 15M
R2202	B B 15L
R2203	B B 16L
R2204	B B 16L
R2205	B B 16L
R2206	B B 16M
R2207	B B 15L
R2208	B B 16L
R2209	B B 16L
R2210	B B 16L
R2211	B B 18L
R2212	B B 18M
R2213	B B 17M
R2214	B B 17M
R2215	B B 18N
R2216	B B 18N
R2217	B B 18N
R2218	B B 18N
R2219	B B 18N
R2220	B B 18N
R2221	B B 17N
R2222	B B 17N
R2223	B B 17N
R2224	B B 17N
R2225	B B 17N
R2226	B B 16N
R2227	B B 16N
R2228	B B 16N
R2229	B B 16N
R2230	B B 15M
R2231	B B 16M
R2232	B B 15L
R2233	B B 15L
R2234	B B 15L
R2235	B B 17N
R2240	B B 16M
R2251	B B 18J
R2253	B B 18K
R2254	B B 18K
R2255	B B 17K
R2256	B B 14L
R2257	B B 14L
R2258	B B 18L
R2259	B B 18L
R2260	B B 14L
R2261	B B 13L
R2262	B B 14M
R2711	B B 15M
R2712	B B 15M
R2713	B B 14M
R2714	B B 15M
R2715	B B 14M
R2716	B B 15E
R3001	B B 13E
R3002	B B 13E
R3003	B B 13E
R3004	B B 14E
R3010	B B 13E
R3014	B B 13E
R3015	B B 13E
R3016	B B 13E
R3017	B B 13E
R3018	B B 13D
R3019	B B 13D
R3020	B B 13D
R3021	B B 12D
R3022	B B 13D
R3023	B B 12D
R3024	B B 13D
R3031	B B 12B
R3032	B B 12B
R3033	B B 13B
R3034	B B 13B
R3035	B B 12B
R3036	B B 13B
R3037	B B 14B
R3038	B B 14B
R3039	B B 14B
R3040	B B 14B
R3041	B B 15B
R3042	B B 15B
R3043	B B 15B
R3044	B B 15B
R3045	B B 15B
R3046	B B 15B
R3047	B B 15B
R3048	B B 15B
R3049	B B 16B
R3050	B B 16B
R3051	B B 16B
R3052	B B 16B
R3053	B B 16C
R3054	B B 16C
R3055	B B 16C
R3056	B B 16C
R3057	B B 16C
R3058	B B 16C
R3059	B B 16C
R3060	B B 16C
R3061	B B 16C
R3062	B B 16C
R3064	B B 17B
R3067	B B 16D
R3068	B B 17D
R3069	B B 16D
R3070	B B 16D
R3072	B B 16D
R3073	B B 16E
R3074	B B 16E
R3075	B B 16E
R3076	B B 16E
R3077	B B 16E
R3078	B B 16E
R3079	B B 15E
R3080	B B 15E
R3201	B C 3B
R3202	B C 3A
R3203	B C 10B
R3204	B C 10C
R3205	B C 7H
R3206	B C 6H
R3207	B C 7G
R3209	B C 12C
R3210	B C 5E
R3211	B C 20D
R3212	B C 17A
R3213	B C 17A
R3214	B C 10B
R3215	B C 9B
R3220	B C 17D
R3221	B C 5B
R3222	B C 17P
R3223	B C 5B
R3224	B C 5B
R3225	B C 5B
R3226	B C 8D
R3227	B C 8D
R3228	B C 8E
R3229	B C 8D
R3230	B C 13E
R3231	B C 14E
R3232	B C 14D
R3233	B C 20D
R3234	B C 20D
R3235	B C 20D
R3236	B C 20D
R3237	B C 16E
R3238	B C 16E
R3239	B C 16E
R3240	B C 3B
R3241	B C 4A
R3242	B C 3B
R3243	B C 8B
R3244	B C 15E
R3246	B C 15E
R3247	B C 15E
R3248	B C 15E
R3249	B C 15E
R3250	B C 13E
R3252	B C 13D
R3253	B C 14B
R3254	B C 16E
R3255	B C 9A
R3256	B C 8B
R3257	B C 6B
R3258	B C 7D
R3259	B C 7D
R3301	B C 8D
R3302	B C 8D
R3303	B C 8D
R3304	B C 8D
R3310	B C 9D
R3314	B C 8C
R3315	B C 9C
R3316	B C 9C
R3317	B C 9B
R3318	B C 9C
R3319	B C 9C
R3320	B C 9C
R3321	B C 9C
R3322	B C 9C
R3323	B C 10B
R3324	B C 10C
R3325	B C 10C
R3326	B C 10C
R3327	B C 10C
R3331	B C 11C
R3332	B C 11C
R3333	B C 11C
R3343	B C 11D
R3344	B C 11E
R3345	B C 12E
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R3349	B C 11E
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R3374	B C 9F
R3375	B C 8F
R3376	B C 8E
R3377	B C 8E
R3378	B C 8E
R3379	B C 8E
R3380	B C 8E
R3501	B C 8C
R3502	B C 8C
R3503	B C 8C
R3504	B C 9B
R3505	B C 8B
R3506	B C 8C
R3507	B C 9E
R3508	B C 20C
R3509	B C 8D
R3510	B C 15B
R3511	B C 13E
R3512	B C 13F
R3513	B C 12F
R3514	B C 12F
R3515	B C 12F
R3516	B C 12F
R3517	B C 9B
R3518	B C 11B
R4001	B C 11I
R4002	B C 10J
R4003	B C 10J
R4004	B C 10J
R4005	B C 10J
R4006	B C 11I
R4007	B C 12I
R4008	B C 10I
R4009	B C 10H
R4010	B C 10I
R4011	B C 10H
R4012	B C 8D
R4013	B C 9J
R4014	B C 10J
R4015	B C 10I
R4201	B C 11H
R4202	B C 11H
R4203	B C 11H
R5001	A D 3Q
R5101	A A 4M
R5102	A A 4M
R5103	A A 4N
R5104	A A 2K
R5105	A A 4J
R5106	A A 2L
R5107	A A 2J
R5108	B B 4M
R5109	B B 2K
R5110	B B 2K
R5111	B B 3M
R5112	B B 2K
R5301	B C 1G
R5302	B C 1G
R5303	B C 1G
R5304	B C 1G
R5305	B C 1G
R5307	B C 4I
R5308	B C 4G
R5309	B C 4F
R5310	B C 4E
R5311	B C 4E
R5312	B C 4G
R5313	B C 4G
R5314	A D 1G
R5315	B D 3I
R5316	A A 4H
R5317	A A 4I
R5319	B C 1D
R5320	B C 1C
R5328	A B 7C
R5330	B B 1B
R5331	B B 1B
R5332	B B 1B
R5333	B C 3F
R5334	B C 3E
R5335	B C 1G
R5336	B C 1G
R5337	B C 2F
R5338	B C 4G
R5339	B C 4A
R5340	B C 3D
R5341	B C 3D
R5342	B C 3D
R5343	B C 3D
R5344	B C 2C
R5345	B C 1C
R5346	B C 2B
R5347	B C 1B
R5348	B C 3E
R5349	B C 3E
R5350	B C 1E
R5351	B C 1E
R5352	B C 4H
R5451	B C 4F
R5452	B C 5F
R6001	B C 21M
R6002	B C 20M
R6020	B C 22K
R6021	B C 22K
R6022	B C 21K
R6023	B C 21K
R6030	B C 21H
R6032	B C 20I
R6033	B C 21J
R6034	B C 21H
R6035	B C 22K
R6037	B C 21I
R6038	B C 22J
R6039	B C 22J
R6051	B C 22P
R6052	B C 21O
R6053	B C 22O
R6054	B C 22O
R6071	B C 22J
R6072	B C 22J
R6080	B C 22M
R6081	B C 22M
R6082	B C 22N
R6083	B C 21N
R6084	B C 21M
R6085	B C 21M
R6086	B C 21M
R7161	B B 13O
R7162	B B 14P
R7163	B B 14P
R7164	B B 14P
R7165	B B 15P
R7166	B B 15P
R7167	B B 15P
R7168	B B 8A
R7169	B B 16O
R7170	B B 16O
R7171	B B 16O
R7172	A B 16P
R7173	B B 15P
R7174	B B 15O
R7175	B B 8P
R7176	B B 8P
R7177	B B 7P
R7178	B B 7P
R7179	B B 7O
R7180	B B 7O
R7181	B B 8P
R7182	B B 7P
R7183	B B 8P
R7184	B B 6P
R7185	B B 6P
R7186	B B 6P
R7201	B C 12C
R7221	B C 11B
R7236	B C 12B

SWITCH

REF.NO.	LOCATION
S3003	A D 7A

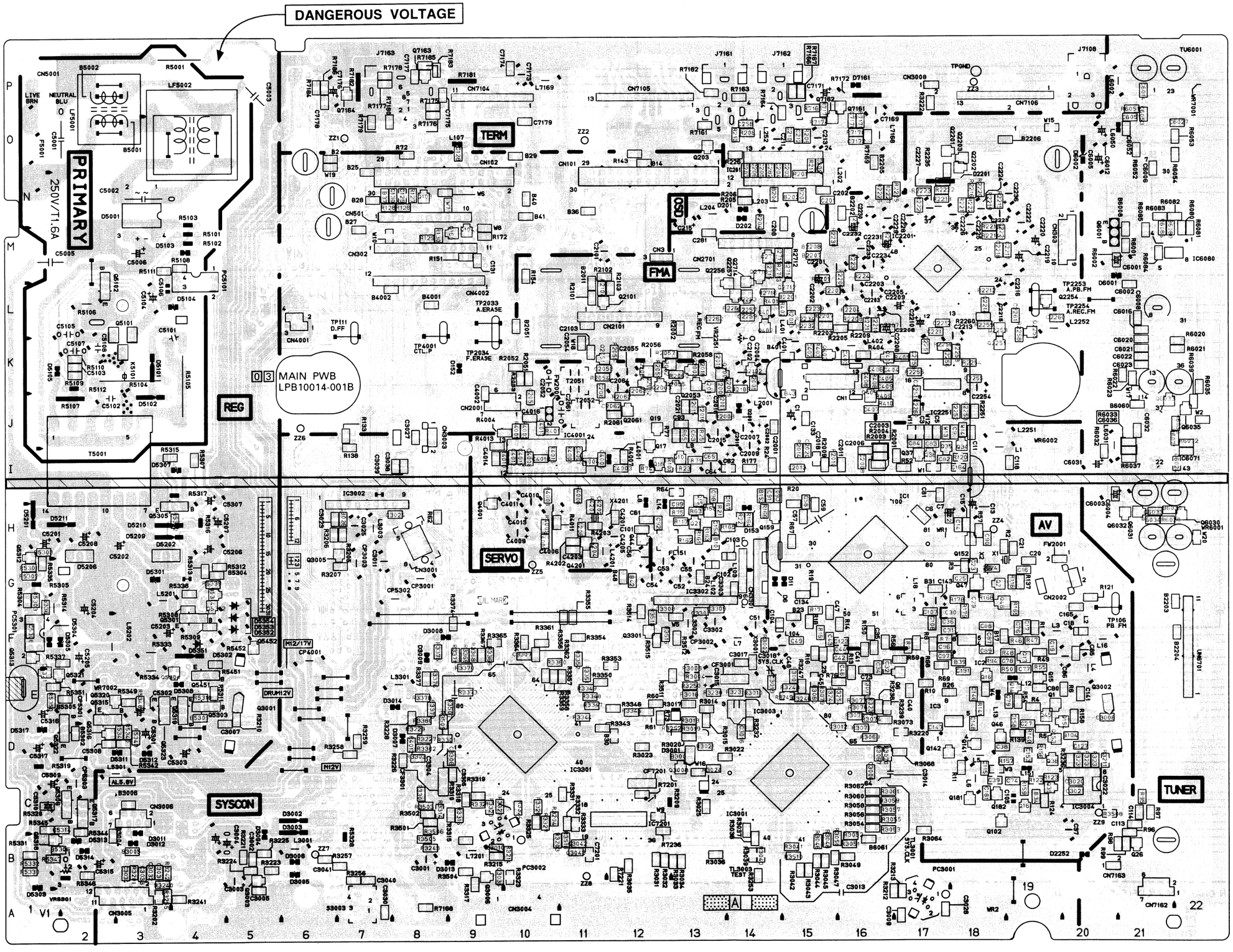
TEST POINT

REF.NO.	LOCATION
TP106	A D 21G
TP111	A D 7L
TP2033	A D 10L
TP2034	A D 10K
TP2253	A D 19L
TP2254	A D 19L
TP4001	A D 9L
TPGND	A D 18P

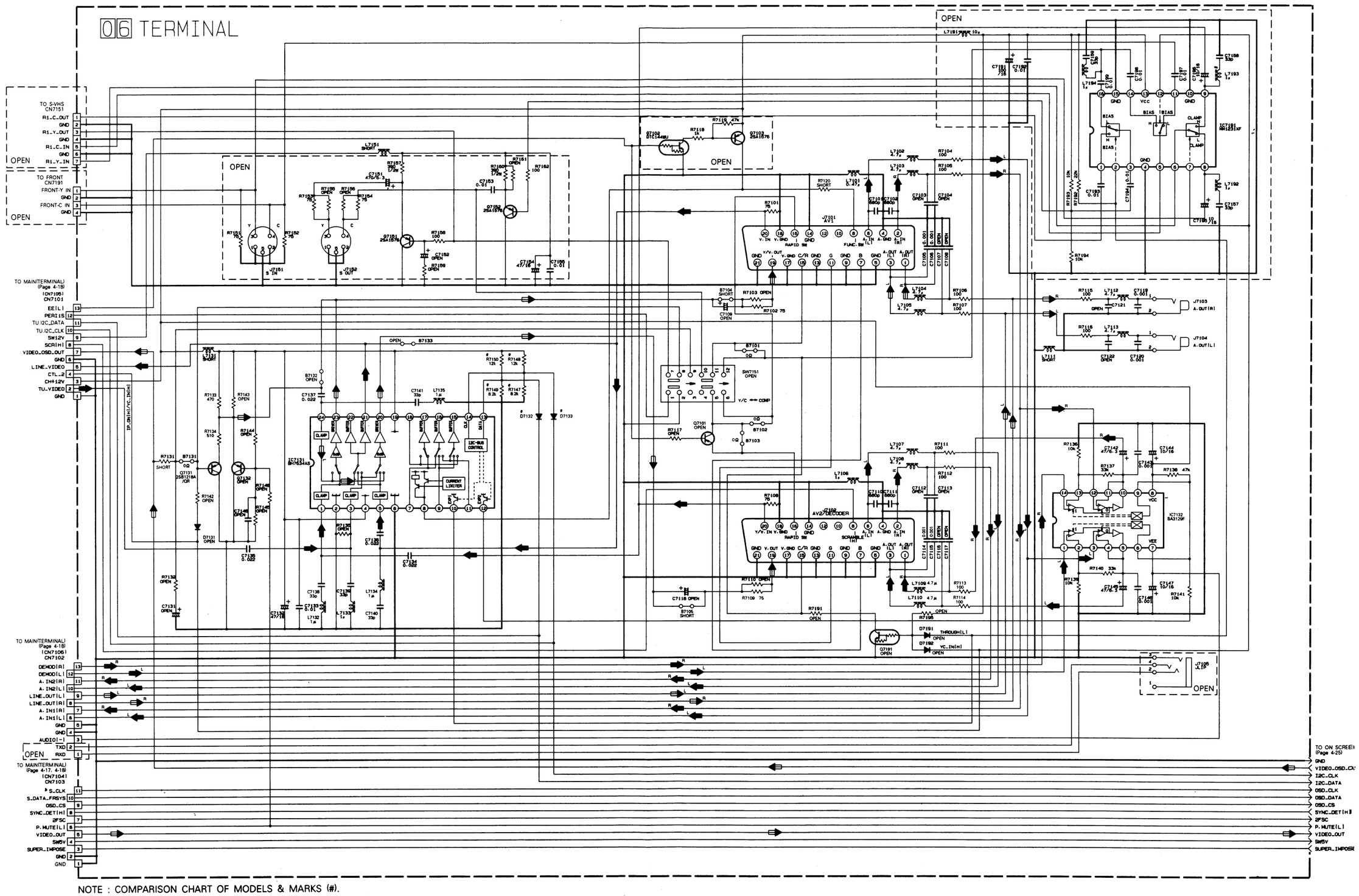
OTHERS

REF.NO.	LOCATION
CF3001	A D 13E
CF3201	A D 9C
CF7201	A D 12C
F5001	A D 1P
FL151	A D 13H
FW2001	A D 20G
K5101	A D 3K
LF5001	A D 2P
LF5002	A D 5P
PC3001	A D 17A
PC3002	A D 9C
PC03115	A D 15H
PC03894	A D 10J
PC5101	A D 4M
PC5301	A D 1F
T2051	A D 11K
T2052	A D 11J
T5001	A D 1J
TL3001	B C 17C
TL3003	A D 14B
TU6001	A D 21P
UN6701	A D 22E
VR2251	A D 14K
VR5301	A D 2B
X1	A D 19G
X2	A D 18G
X3001	A D 14F
X4201	A D 11H

4.9 MAIN AND A/C HEAD CIRCUIT BOARDS


DANGEROUS VOLTAGE
PRIMARY
250V/T1.6A
REG
SYSCON
SERVO
TERM
FMA
OSD
AV
TUNER
MAIN PWB
LPB10014-001B
03
POWER
CN5001
B5002
R5001
LF5002
LF5001
C5001
F5001
C5003
C5002
D5001
R5103
R5101
R5102
D5103
C5005
C5006
R5108
R5111
PCS101
Q5102
C5104
D5104
R5106
C5105
C5107
C5108
Q5101
C5101
R5110
C5103
KS101
D5101
R5105
R5109
R5104
R5112
C5102
D5102
R5107
T5001
R5315
D5307
R5317
C5307
D5211
D5210
D5209
D5202
C5207
C5201
C5208
C5202
C5206
D5206
D5301
R5312
BS304
R5313
R5316
R5336
L5201
R5338
R5339
R5337
R5334
R5335
R5349
WR7002
Q5320
Q5315
C5302
D5308
Q5451
R5451
R5452
Q5452
H12/17V
CP4001
DRUM12V
Q3001
H12V
A5.6V
B3006
CN3006
D3011
D3012
D5314
R5315
R5346
VR5301
CN3005
D5309
R5345
R5344
D5313
R5343
C5315
C5316
C5317
C5309
C5310
C5311
C5312
R5342
C5303
C3007
R3210
R3258
R3259
R3229
R3226
C3904
C3905
C3906
R3319
R3310
R3315
R3316
R3317
R3318
R3320
R3321
R3322
R3323
R3324
R3325
R3326
R3327
R3328
R3329
R3330
R3331
R3332
R3333
R3334
R3335
R3336
R3337
R3338
R3339
R3340
R3341
R3342
R3343
R3344
R3345
R3346
R3347
R3348
R3349
R3350
R3351
R3352
R3353
R3354
R3355
R3356
R3357
R3358
R3359

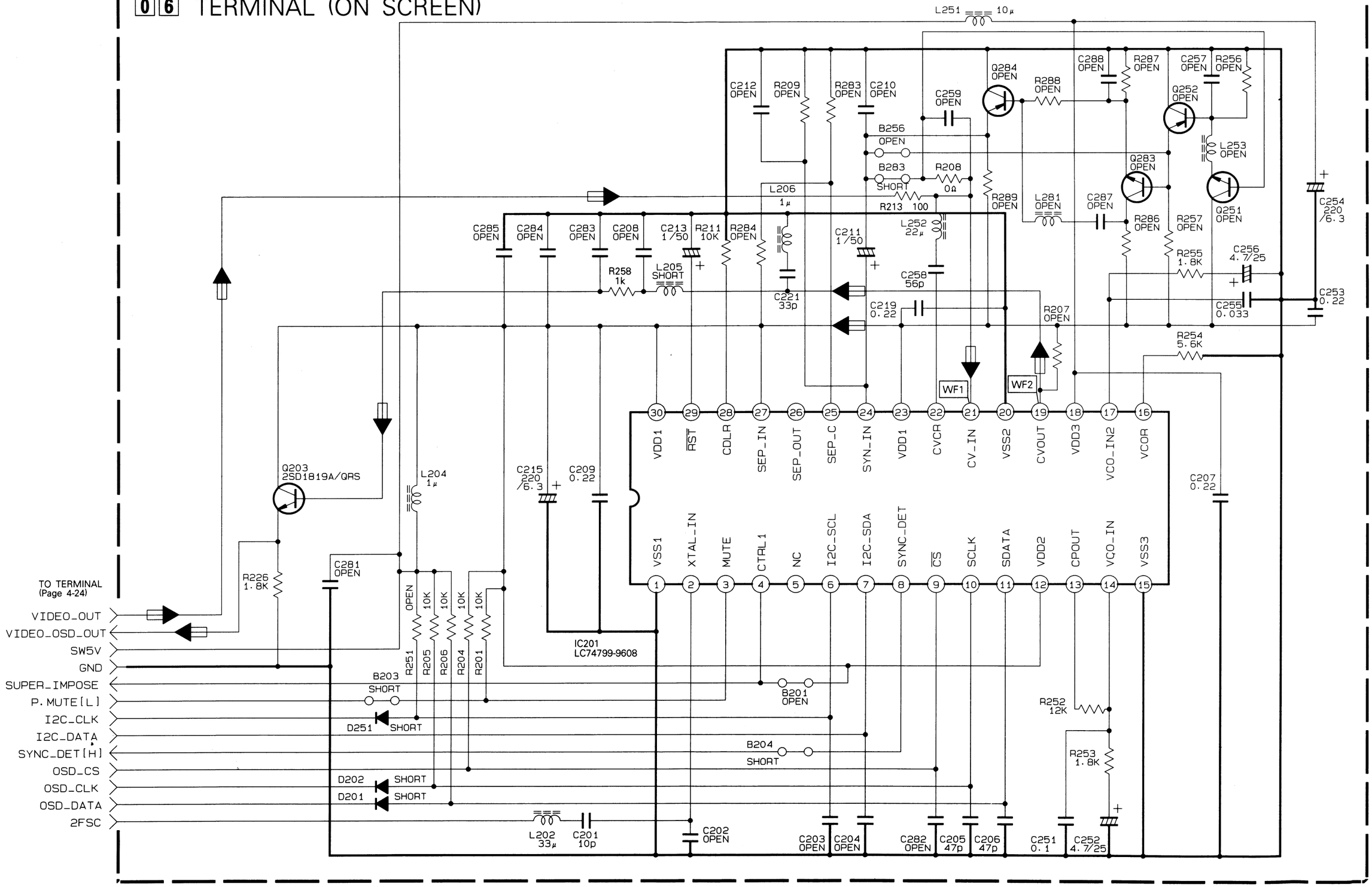
4.10 TERMINAL SCHEMATIC DIAGRAM



NOTE : COMPARISON CHART OF MODELS & MARKS (#).

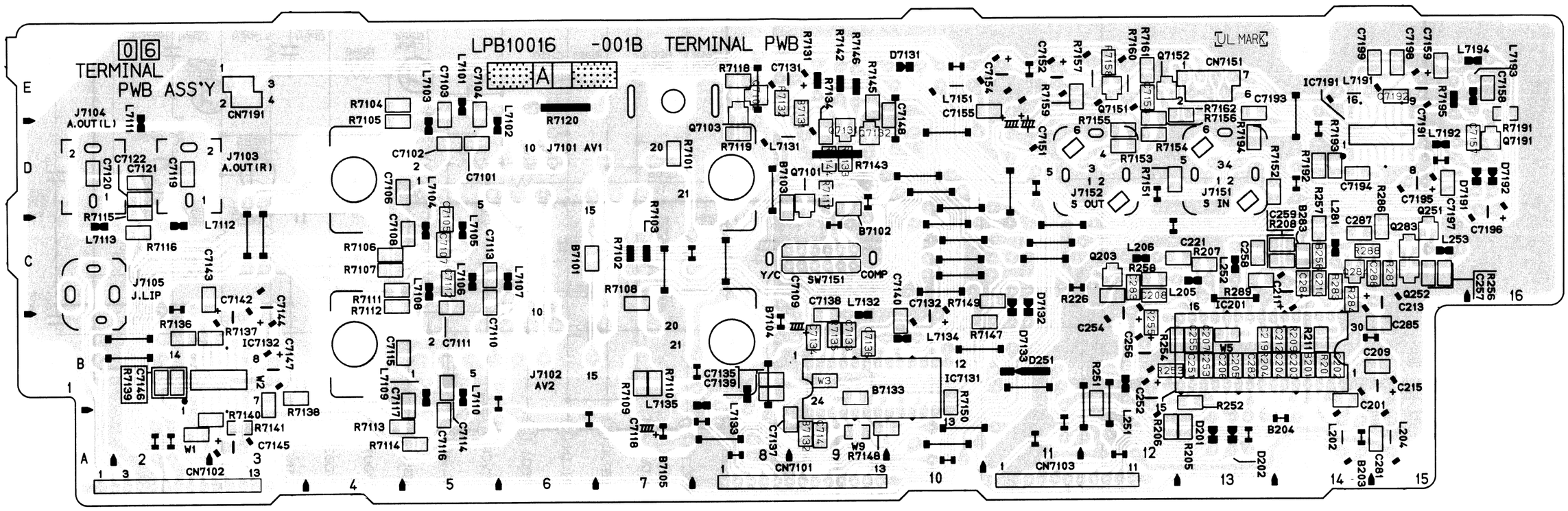
	REF.NO	D7132 D7133	R7147 -R7150
MODEL	HR-J758E	1SS133	USED
	HR-J758EH	SHORT	NOT USED

06 TERMINAL (ON SCREEN)



NOTE : For ON SCREEN waveforms, please refer to pase 4-28.

4.12 TERMINAL CIRCUIT BOARD AND WAVEFORMS



COMPONENT PARTS LOCATION GUIDE <TERMINAL>

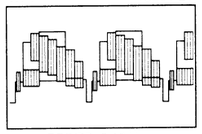
REF.NO.	LOCATION
CAPACITOR	
C201	B C 14B
C202	B C 14B
C203	B C 14B
C204	B C 14B
C205	B C 13B
C206	B C 13B
C207	B C 13B
C208	B C 12C
C209	B C 15B
C210	B C 14C
C211	A D 14C
C212	A D 14B
C213	A D 15C
C215	A D 15B
C219	B C 13B
C221	B C 13C
C251	B C 13B
C252	A D 12B
C253	B C 13B
C254	A D 12B
C255	B C 13B
C256	A D 12B
C257	B C 15C
C258	B C 13C
C259	B C 14C
C281	B C 15A
C282	B C 13B
C283	B C 12C
C284	B C 14C
C285	B C 15B
C287	B C 14C
C288	B C 15C
C7101	B C 5D
C7102	B C 5D
C7103	B C 5E
C7104	B C 5E
C7105	B C 5C
C7106	B C 5D
C7107	B C 5C
C7108	B C 5C
C7109	A D 9B
C7110	B C 5C
C7111	B C 5C
C7112	B C 5C
C7113	B C 5C
C7114	B C 5B
C7115	B C 5B
C7116	B C 5A
C7117	B C 5B
C7118	A D 7A
C7119	B C 2D
C7120	B C 1D
C7121	B C 2D
C7122	B C 2D
C7131	A D 9E
C7132	A D 10B
C7133	B C 9B
C7134	B C 9B
C7135	B C 8B
C7136	B C 9B
C7137	B C 9A
C7138	B C 9B
C7139	B C 8B
C7140	B C 10B
C7141	B C 9A
C7142	A D 3B
C7143	B C 3C
C7144	A D 3B
C7145	A D 3A
C7146	B C 2B
C7147	A D 3B
C7148	B C 10E
C7151	A D 11E
C7152	A D 11E
C7153	B C 12E
C7154	A D 11E
C7155	B C 11E
C7157	B C 16D
C7158	B C 16E
C7159	B C 15E
C7191	A D 15E
C7192	B C 15E
C7193	B C 13E
C7194	B C 14D
C7195	A D 15D
C7196	A D 16C
C7197	B C 15D
C7198	B C 15E
C7199	B C 15E
CONNECTOR	
CN7101	A D 8A
CN7102	A D 1A
CN7103	A D 11A
CN7151	A D 13E
CN7191	A D 3E
DIODE	
D201	A D 13A
D202	A D 13A
D251	A D 11B
D7131	A D 10E
D7132	A D 11C
D7133	A D 11C
D7191	A D 16D
D7192	A D 16D
IC	
IC201	A D 14B
IC7131	A D 9B
IC7132	B C 3B
IC7191	B C 15D
JACK	
J7101	A D 6D
J7102	A D 6B
J7103	A D 2D
J7104	A D 1D
J7105	A D 1C
J7151	A D 13D
J7152	A D 12D
COIL	
L202	A D 14A
L204	A D 15A
L205	A D 13C
L206	A D 12C
L251	A D 12B
L252	A D 13C
L253	A D 15C
L281	A D 14C
L7101	A D 5E
L7102	A D 6D
L7103	A D 5D
L7104	A D 5D
L7105	A D 5D
L7106	A D 5C
L7107	A D 6C
L7108	A D 5C
L7109	A D 5B
L7110	A D 5B
L7111	A D 2D
L7112	A D 2C
L7113	A D 2C
L7131	A D 9D
L7132	A D 9B
L7133	A D 8A
L7134	A D 10B
L7135	A D 8B
L7151	A D 10E
L7191	A D 15E
L7192	A D 15D
L7193	A D 16E
L7194	A D 16E
TRANSISTOR	
Q203	B C 12C
Q251	B C 15C
Q252	B C 15C
Q283	B C 15C
Q284	B C 14C
Q7101	B C 9D
Q7102	B C 8E
Q7103	B C 8E
Q7131	B C 9D
Q7132	B C 9D
Q7151	B C 12E
Q7152	B C 12E
Q7191	B C 16D
RESISTOR	
R201	B C 14B
R204	B C 13B
R205	B C 13A
R206	B C 12A
R207	B C 13C
R208	B C 14C
R209	B C 14B
R211	B C 14B
R226	B C 12C
R251	B C 12B
R252	B C 13B
R253	B C 12B
R254	B C 13B
R255	B C 12B
R256	B C 15C
R257	B C 14C
R258	B C 12C
R283	B C 14C
R284	B C 14C
R286	B C 15C
R287	B C 15C
R288	B C 14C
R289	B C 13C
R7101	B C 7D
R7102	A D 7C
R7103	A D 7C
R7104	B C 4E
R7105	B C 4D
R7106	B C 4C
R7107	B C 4C
R7108	B C 7C
R7109	B C 7B
R7110	B C 7B
R7111	B C 4C
R7112	B C 4C
R7113	B C 5A
R7114	B C 5A
R7115	B C 2D
R7116	B C 2C
R7117	B C 9D
R7118	B C 8E
R7119	B C 8D
R7120	A D 7E
R7131	A D 9E
R7132	B C 8E
R7133	B C 9D
R7134	B C 9D
R7135	B C 9B
R7136	B C 2B
R7137	B C 3B
R7138	B C 3B
R7139	B C 2B
R7140	B C 3A
R7141	B C 3A
R7142	A D 9E
R7143	A D 9D
R7144	B C 9D
R7145	B C 9E
R7146	A D 9E
R7147	B C 11B
R7148	B C 10A
R7149	B C 11C
R7150	B C 10B
R7151	B C 12D
R7152	B C 14D
R7153	B C 12D
R7154	B C 12D
R7155	B C 12D
R7156	B C 12D
R7157	A D 12E
R7158	B C 12E
R7159	B C 11E
R7160	A D 12E
R7161	B C 12E
R7162	B C 13D
R7191	B C 16D
R7192	B C 14D
R7193	B C 14D
R7194	B C 13D
R7195	A D 15D
SWITCH	
SW7151	A D 9C

WAVEFORMS

TERMINAL

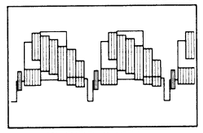
— ON SCREEN —

WF1 IC201-21



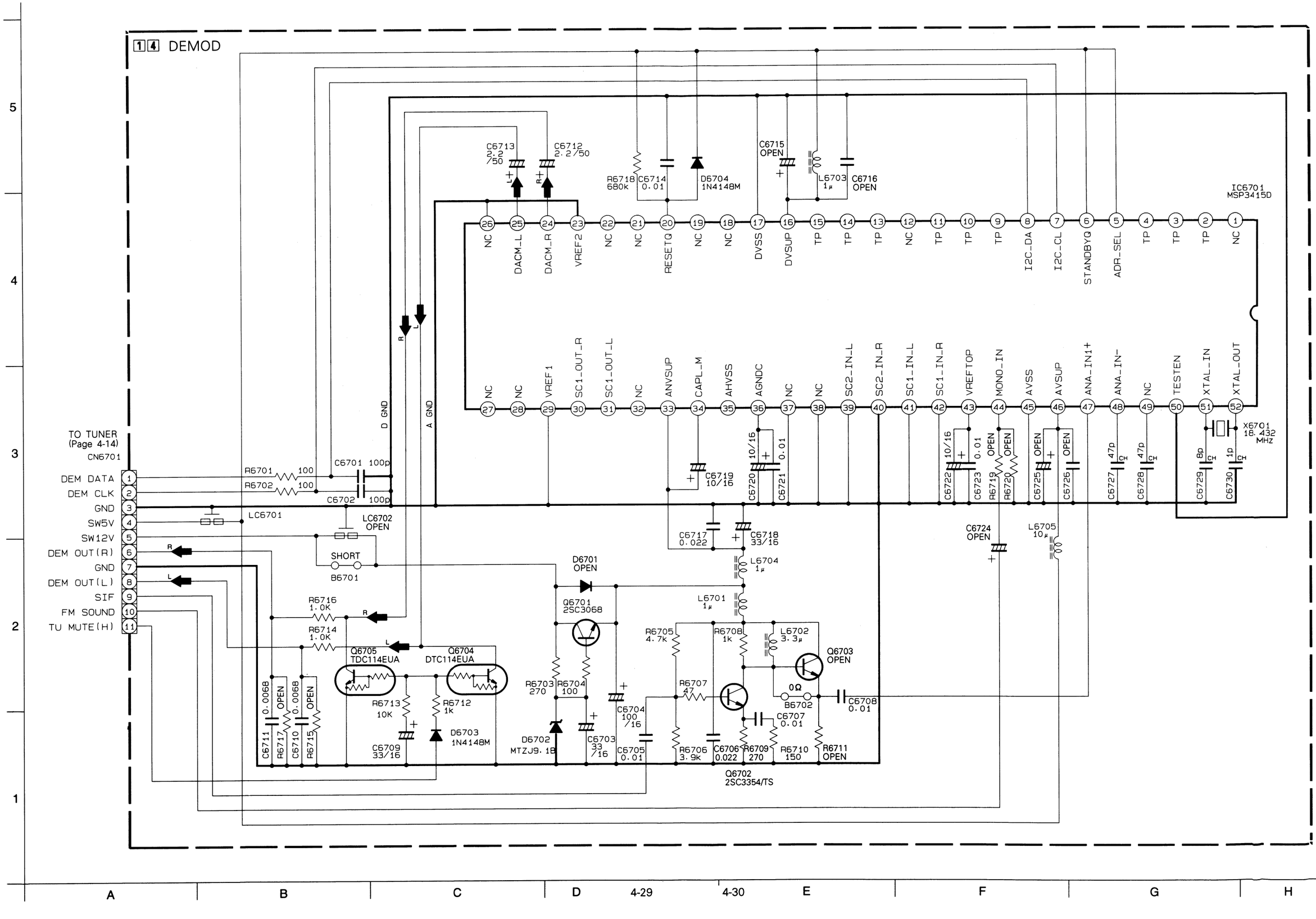
REC/PB 2.15 Vp-p
0.1 V/20 µsec/DIV

WF2 IC201-19

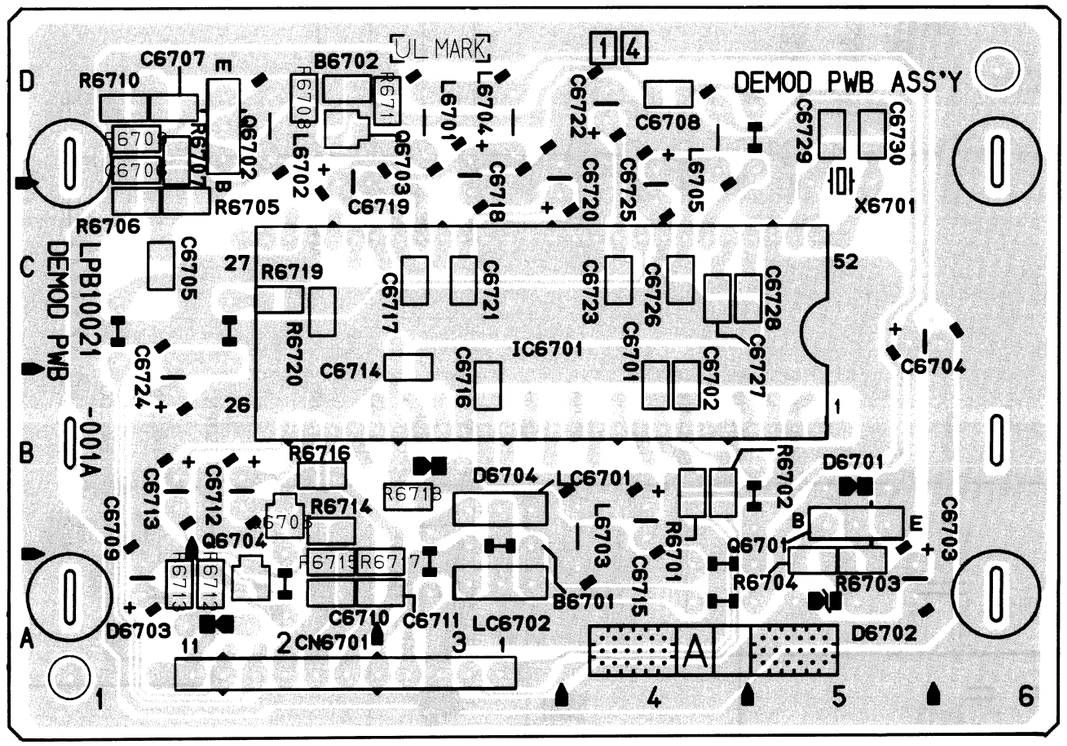


REC/PB 2.15 Vp-p
0.1 V/20 µsec/DIV

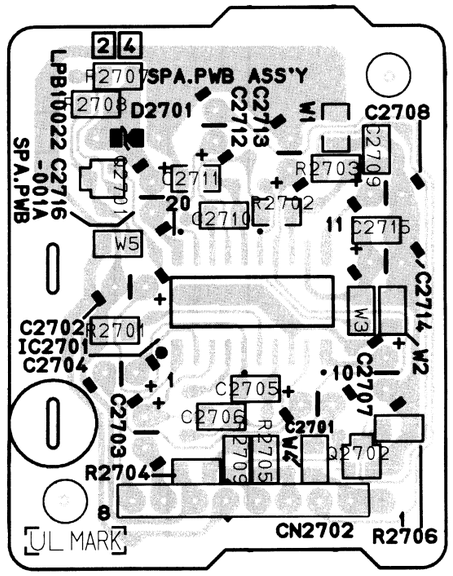
4.13 DEMODULATOR SCHEMATIC DIAGRAM [HR-J758EH]



— DEMODULATOR — [HR-J758EH]



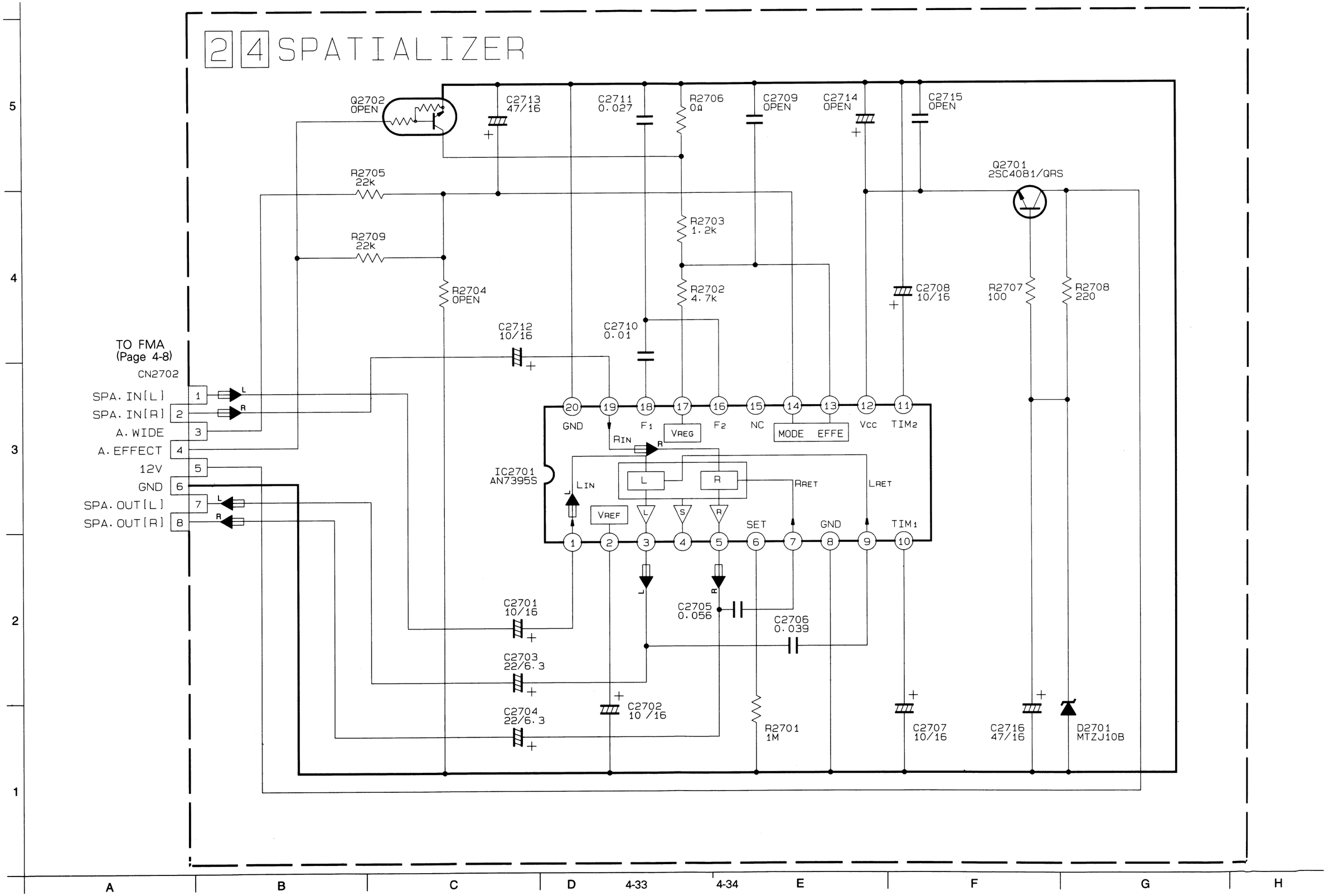
— SPATIALIZER —



COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

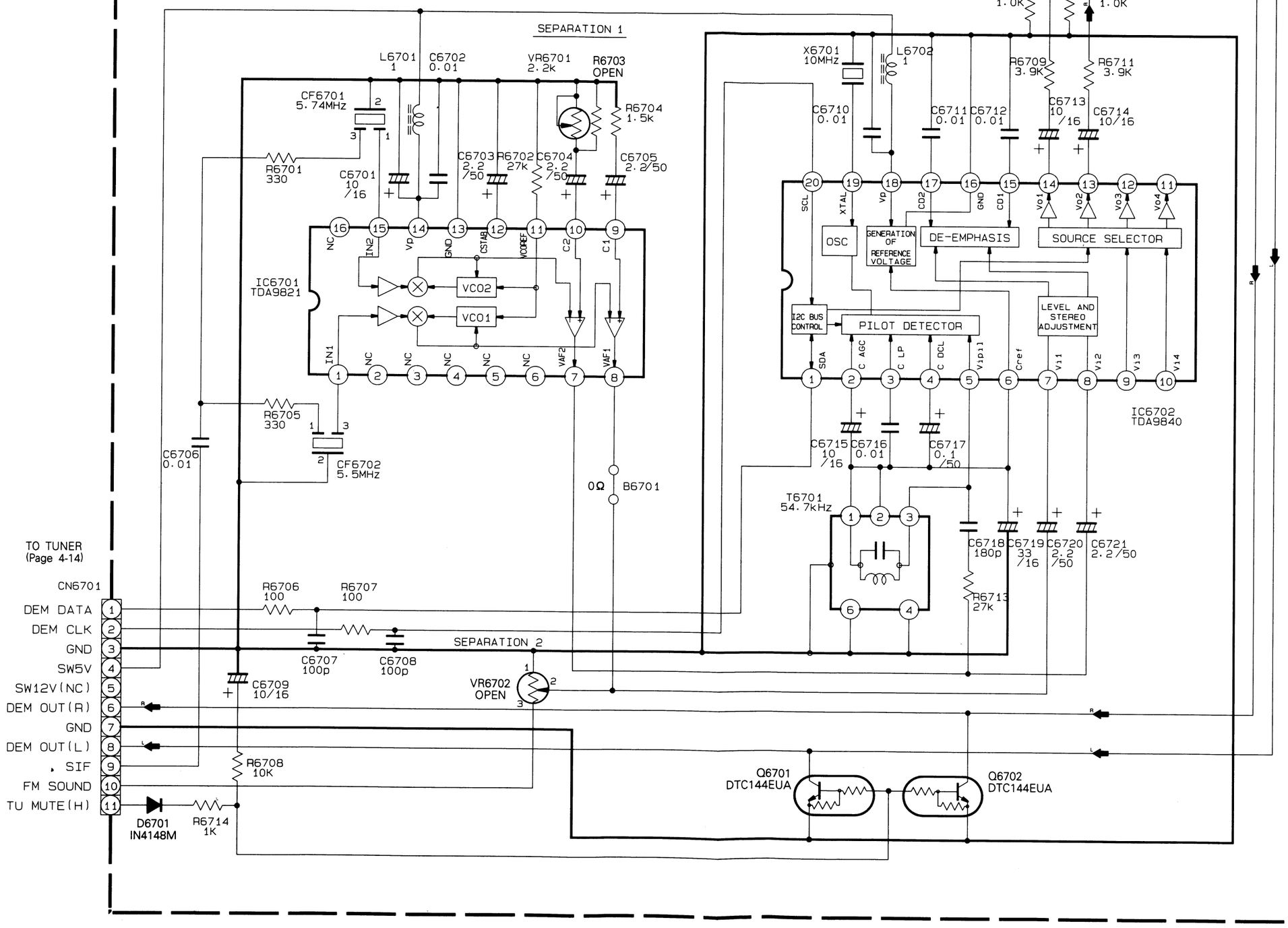
REF.NO.	LOCATION		
CAPACITOR			
C6701	B	C	4B
C6702	B	C	4B
C6703	A	D	5A
C6704	A	D	5C
C6705	B	C	1C
C6706	B	C	1D
C6707	B	C	1D
C6708	B	C	4D
C6709	A	D	1A
C6710	B	C	2A
C6711	B	C	3A
C6712	A	D	2B
C6713	A	D	1B
C6714	B	C	3C
C6715	A	D	4B
C6716	B	C	3B
C6717	B	C	3C
C6718	A	D	3D
C6719	A	D	2D
C6720	A	D	3C
C6721	B	C	3C
C6722	A	D	4D
C6723	B	C	4C
C6724	A	D	1B
C6725	A	D	4D
C6726	B	C	4C
C6727	B	C	4C
C6728	B	C	5C
C6729	B	C	5D
C6730	B	C	5D
CONNECTOR			
CN6701	A	D	3A
DIODE			
D6701	A	D	5B
D6702	A	D	5A
D6703	A	D	2A
D6704	A	D	3B
IC			
IC6701	A	D	5B
COIL			
L6701	A	D	3D
L6702	A	D	2D
L6703	A	D	4A
L6704	A	D	3D
L6705	A	D	4D
TRANSISTOR			
Q6701	A	D	5B
Q6702	A	D	2D
Q6703	B	C	2D
Q6704	B	C	2A
Q6705	B	C	2B
RESISTOR			
R6701	B	C	4B
R6702	B	C	4B
R6703	B	C	5A
R6704	B	C	5A
R6705	B	C	1C
R6706	B	C	1C
R6707	B	C	1D
R6708	B	C	2D
R6709	B	C	1D
R6710	B	C	1D
R6711	B	C	3D
R6712	B	C	2A
R6713	B	C	1A
R6714	B	C	2B
R6715	B	C	2A
R6716	B	C	2B
R6717	B	C	3A
R6718	B	C	3B
R6719	B	C	2C
R6720	B	C	2C
OTHERS			
LC6701	A	D	3B
LC6702	A	D	3A
X6701	A	D	5D

4.15 SPATIALIZER SCHEMATIC DIAGRAM

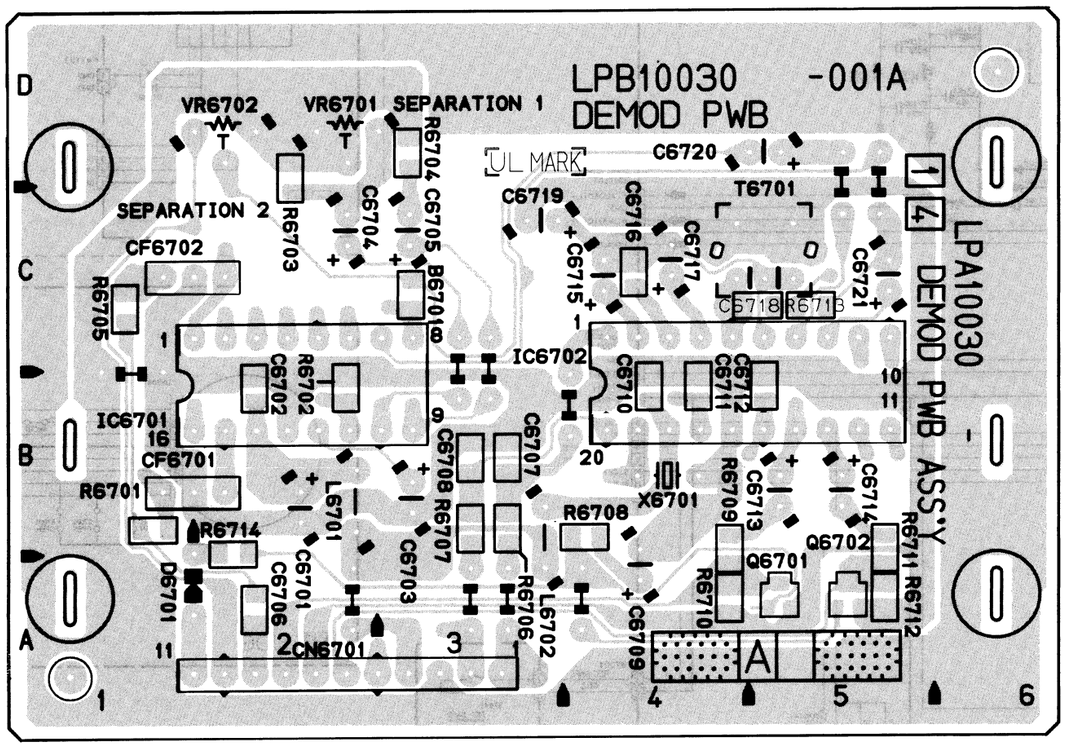


4.16 DEMODULATOR SCHEMATIC DIAGRAM [HR-J758E]

14 DEMOD



— DEMODULATOR — [HR-J758E]



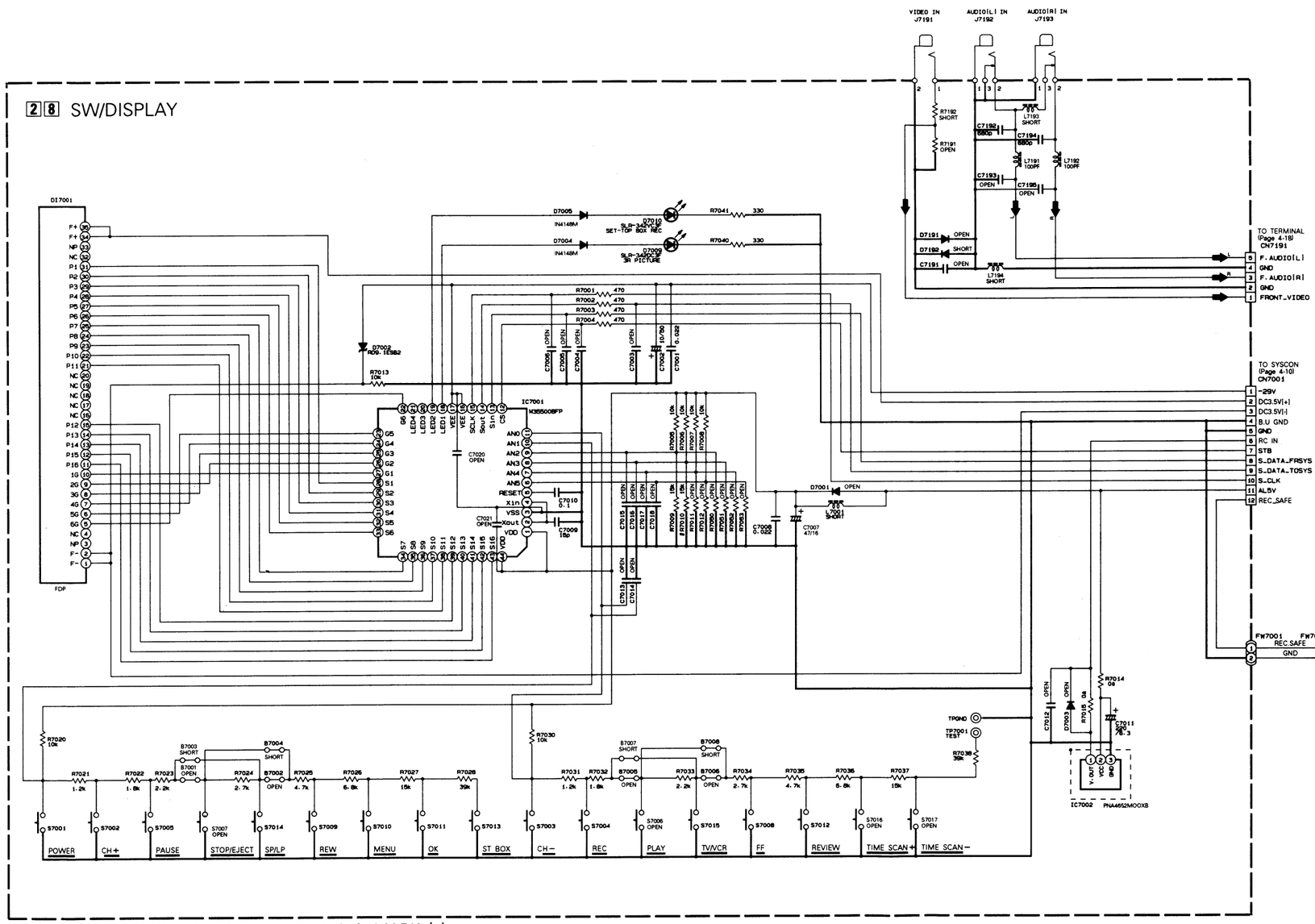
COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

REF.NO.	LOCATION		
CAPACITOR			
C6701	A	D	2B
C6702	B	C	2B
C6703	A	D	3B
C6704	A	D	2C
C6705	A	D	3C
C6706	B	C	2A
C6707	B	C	3B
C6708	B	C	3B
C6709	A	D	4A
C6710	B	C	4B
C6711	B	C	4B
C6712	B	C	5B
C6713	A	D	5B
C6714	A	D	5B
C6715	A	D	4C
C6716	B	C	4C
C6717	A	D	4C
C6718	B	C	5C
C6719	A	D	3C
C6720	A	D	5D
C6721	A	D	5C

REF.NO.	LOCATION		
DIODE			
D6701	A	D	2A
IC			
IC6701	A	D	2C
IC6702	A	D	4C
COIL			
L6701	A	D	2B
L6702	A	D	3B
TRANSISTOR			
Q6701	B	C	5A
Q6702	B	C	5A
RESISTOR			
R6701	B	C	1B
R6702	B	C	2B
R6703	B	C	2D
R6704	B	C	3D
R6705	B	C	1C
R6706	B	C	3B
R6707	B	C	3B
R6708	B	C	4B

REF.NO.	LOCATION		
R6709	B	C	4B
R6710	B	C	4A
R6711	B	C	5B
R6712	B	C	5A
R6713	B	C	5C
R6714	B	C	2B
OTHER			
CF6701	A	D	2B
CF6702	A	D	1C
CN6701	A	D	3A
T6701	A	D	5C
VR6701	A	D	2D
VR6702	A	D	2D

4.18 SW/DISPLAY, REC SAFETY AND JOG SCHEMATIC DIAGRAMS

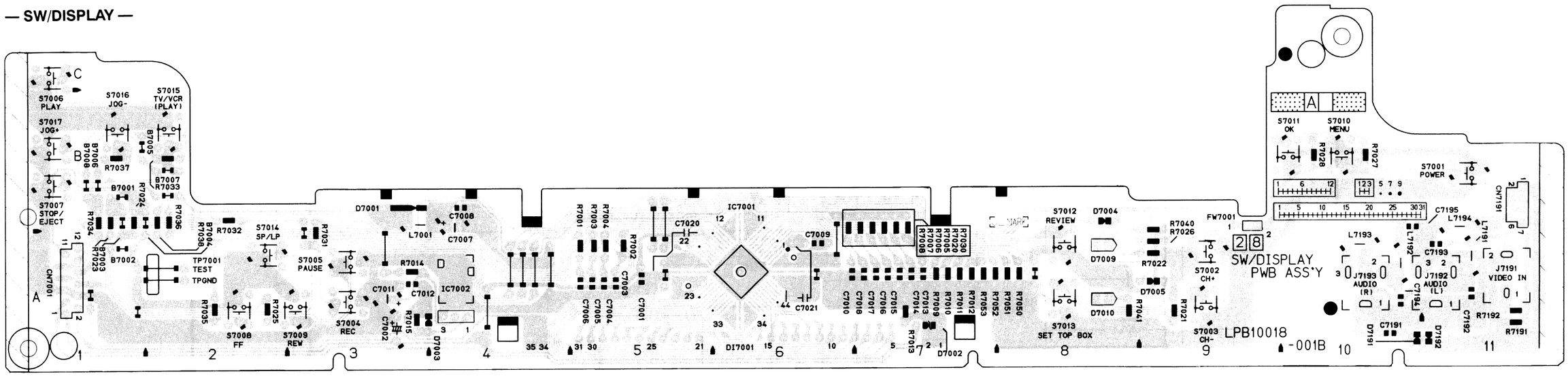


NOTE : COMPARISON CHART OF MODELS & MARK (#).

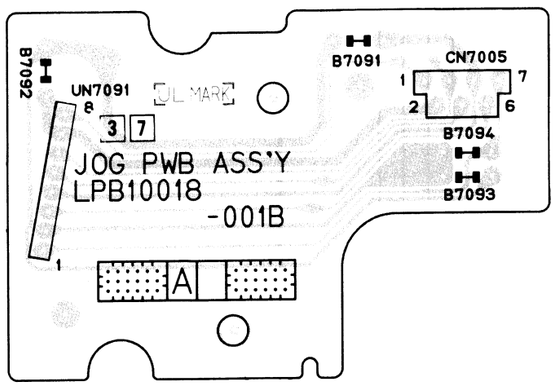
	REF.NO.	R7010
MODEL	HR-J758E	NOT USED
	HR-J758EH	USED

4.19 SW/DISPLAY, REC SAFETY AND JOG CIRCUIT BOARDS

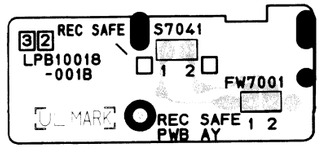
— SW/DISPLAY —



— JOG —



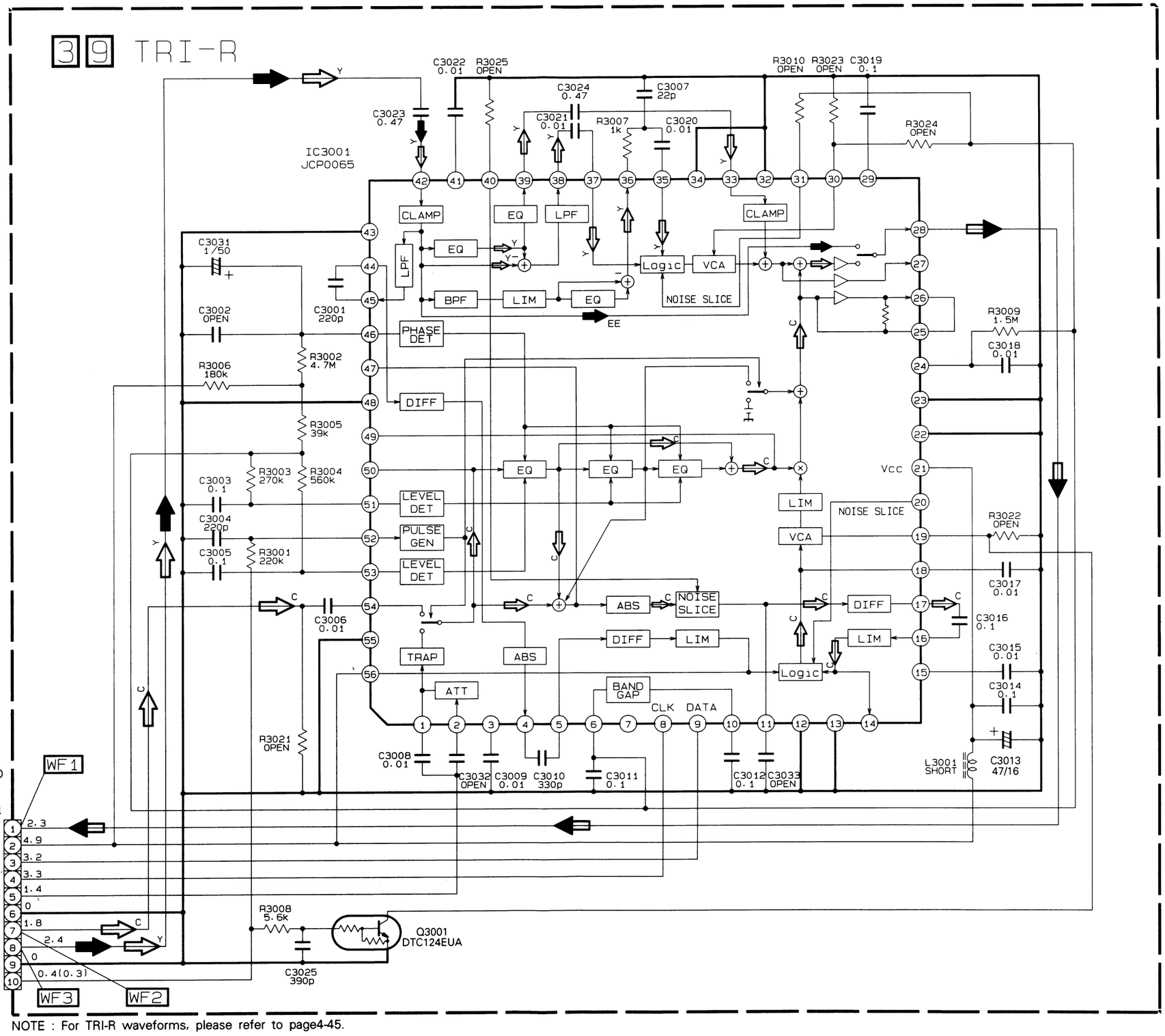
— REC SAFETY —



COMPONENT PARTS LOCATION GUIDE <SW/DISPALY>

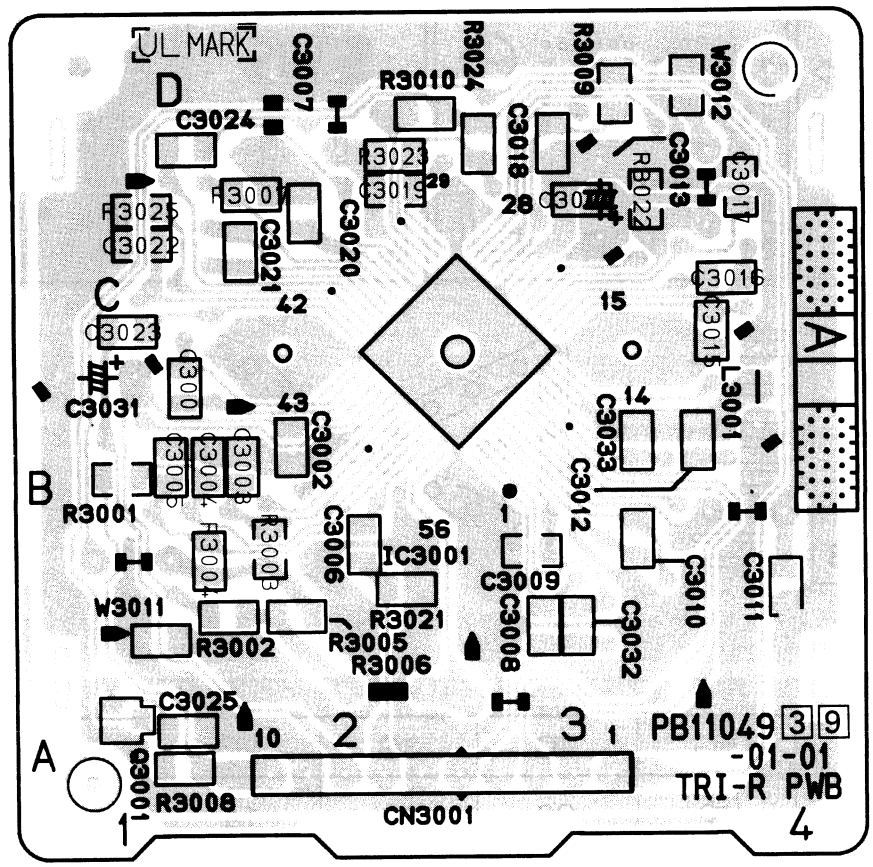
REF.NO.	LOCATION
CAPACITOR	
C7001	A D 5A
C7002	A D 3A
C7003	A D 5A
C7004	A D 5A
C7005	A D 5A
C7006	A D 5A
C7007	A D 4B
C7008	A D 4B
C7009	A D 6A
C7010	A D 6A
C7011	A D 3A
C7012	A D 3A
C7013	A D 7A
C7014	A D 7A
C7015	A D 7A
C7016	A D 7A
C7017	A D 7A
C7018	A D 7A
C7020	A D 5A
C7021	A D 6A
C7191	A D 10A
C7192	A D 11A
C7193	A D 11A
C7194	A D 10A
C7195	A D 11A
CONNECTOR	
CN7001	A D 1A
CN7191	A D 11B
DIODE	
D7001	A D 3B
D7002	A D 7A
D7003	A D 4A
D7004	A D 8B
D7005	A D 9A
D7009	A D 8A
D7010	A D 8A
D7191	A D 10A
D7192	A D 11A
IC	
IC7001	B C 6A
IC7002	A D 4A
JACK	
J7191	A D 11A
J7192	A D 11A
J7193	A D 10A
COIL	
L7001	A D 4B
L7191	A D 11A
L7192	A D 10A
L7193	A D 10A
L7194	A D 11A
RESISTOR	
R7001	A D 5A
R7002	A D 5A
R7003	A D 5A
R7004	A D 5A
R7005	A D 7A
R7006	A D 7A
R7007	A D 7A
R7008	A D 6A
R7009	A D 7A
R7010	A D 7A
R7011	A D 7A
R7012	A D 7A
R7013	A D 7A
R7014	A D 3A
R7015	A D 3A
R7020	A D 7B
R7021	A D 9A
R7022	A D 9A
R7023	A D 1A
R7024	A D 1B
R7025	A D 2A
R7026	A D 9A
R7027	A D 10B
R7030	A D 7B
R7031	A D 3B
R7032	A D 2B
R7033	A D 2B
R7034	A D 1B
R7035	A D 2A
R7036	A D 2A
R7037	A D 1B
R7038	A D 2A
R7040	A D 9A
R7041	A D 8A
R7050	A D 8A
R7051	A D 8A
R7052	A D 7A
R7053	A D 7A
R7191	A D 11A
R7192	A D 11A
SWITCH	
S7001	A D 11B
S7002	A D 9A
S7003	A D 9A
S7004	A D 3A
S7005	A D 3A
S7006	A D 1C
S7007	A D 1B
S7008	A D 2A
S7009	A D 3A
S7010	A D 10B
S7011	A D 10B
S7012	A D 8A
S7013	A D 8A
S7014	A D 2A
S7015	A D 2B
S7016	A D 1B
S7017	A D 1B
TEST POINT	
TP7001	A D 1A
TPGND	A D 1A
OTHERS	
DI7001	A D 6A
FW7001	A D 9B

4.20 TRI-R SCHEMATIC DIAGRAM



NOTE : For TRI-R waveforms, please refer to page4-45.

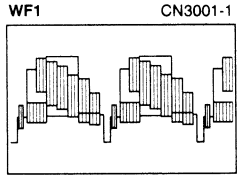
4.21 TRI-R CIRCUIT BOARD AND WAVEFORMS



WAVEFORMS

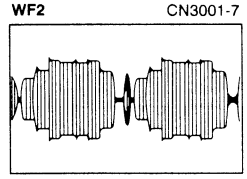
— TRI-R —

WF1 VIDEO.OUT CN3001-1



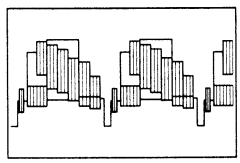
REC/PB 2.1 VP-P
0.1 V/20 µsec/DIV

WF2 C.OUT CN3001-7



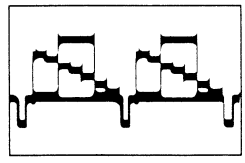
PB 0.6 Vp-p
20 mV/20 µsec/DIV

WF3-1 Y.OUT CN3001-8



REC 2.15 Vp-p
0.1 V/20 µsec/DIV

WF3-2 Y.OUT CN3001-8



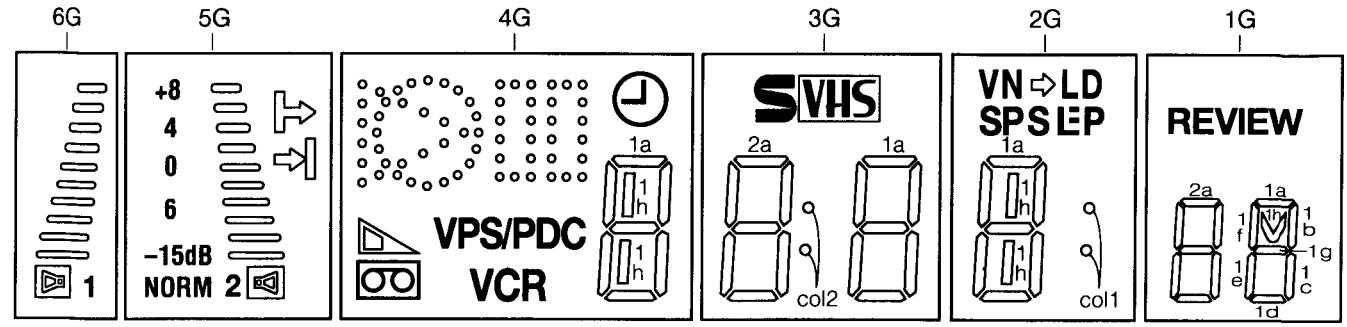
PB 2.15 Vp-p
0.1 V/20 µsec/DIV

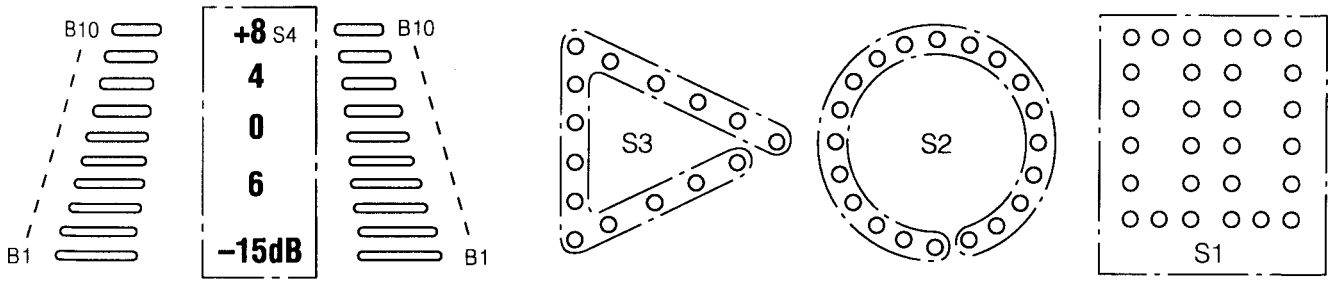
COMPONENT PARTS LOCATION GUIDE < TRI-R >

REF.NO.	LOCATION			REF.NO.	LOCATION		
CAPACITOR				CONNECTOR			
C3001	B	C	1C	CN3001	A	D	3A
C3002	B	C	2B				
C3003	B	C	2B	IC			
C3004	B	C	1B	IC3001	B	C	2C
C3005	B	C	1B				
C3006	B	C	2B	COIL			
C3007	A	D	2D	L3001	A	D	4B
C3008	B	C	3B				
C3009	B	C	3B	TRANSISTOR			
C3010	B	C	3B	Q3001	B	C	1A
C3011	B	C	4B				
C3012	B	C	4B	RESISTOR			
C3013	A	D	3C	R3001	B	C	1B
C3014	B	C	3C	R3002	B	C	1B
C3015	B	C	4C	R3003	B	C	2B
C3016	B	C	4C	R3004	B	C	1B
C3017	B	C	4C	R3005	B	C	2B
C3018	B	C	3D	R3006	A	D	2A
C3019	B	C	2C	R3007	B	C	2C
C3020	B	C	2C	R3008	B	C	1A
C3021	B	C	2C	R3009	B	C	3D
C3022	B	C	1C	R3010	B	C	2D
C3023	B	C	1C	R3021	B	C	2B
C3024	B	C	1D	R3022	B	C	3C
C3025	B	C	1A	R3023	B	C	2D
C3031	A	D	1C	R3024	B	C	3D
C3032	B	C	3B	R3025	B	C	1C
C3033	B	C	3B				

4.22 FDP GRID ASSIGNMENT ANODE CONNECTION

GRID ASSIGNMENT





(6G, 5G) (4G)

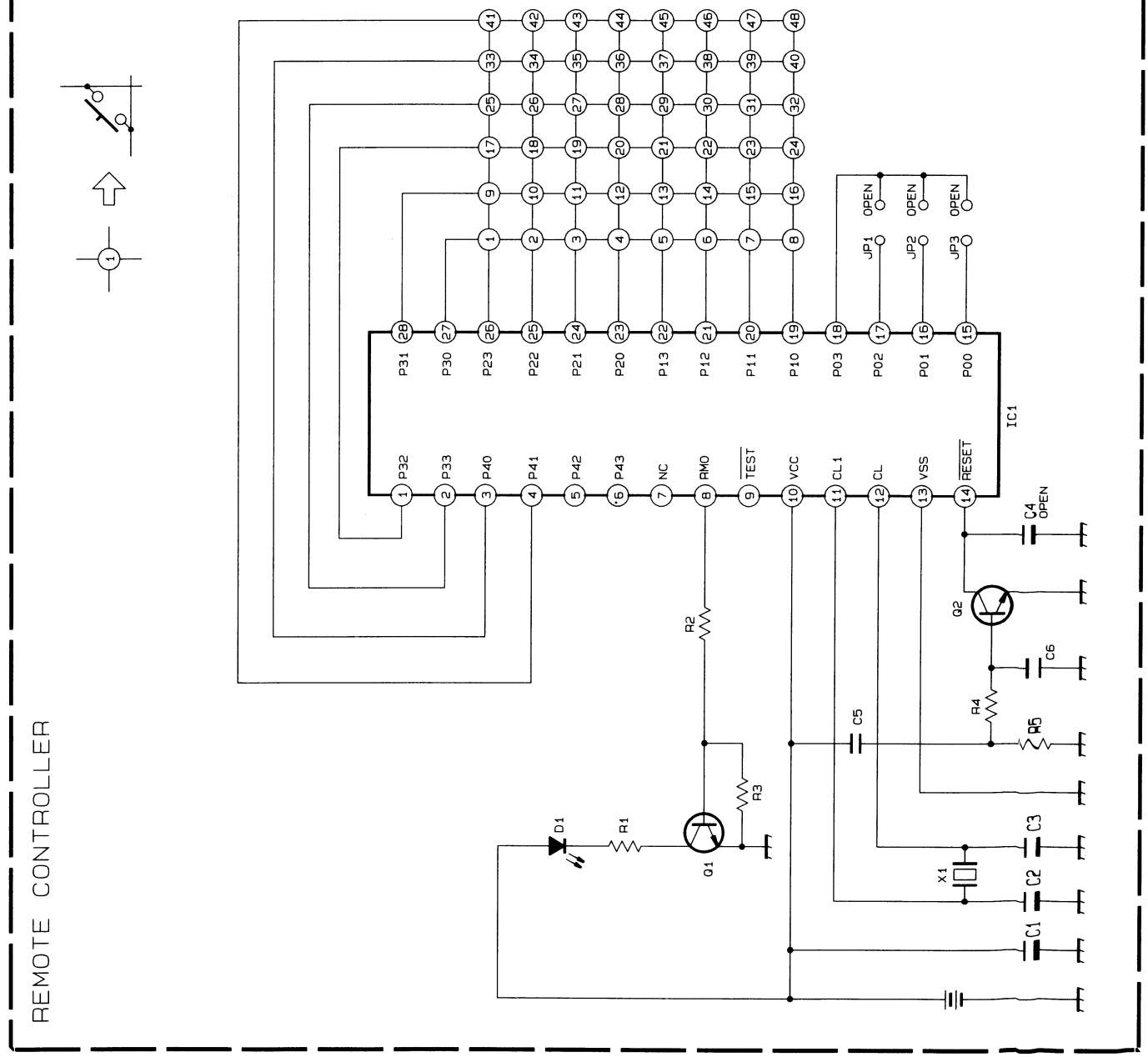
ANODE CONNECTION

	6G	5G	4G	3G	2G	1G
P 1	—	⇨	S2	1a	1a	1a
P 2	—	⇨	S1	1b	1b	1b
P 3	—	S4	S3	1f	1f	1f
P 4	—	NORM	VPS/PDC	1g	1g	1g
P 5	1	2	🕒	1c	1c	1c
P 6	▷	◁	◺	1e	1e	1e
P 7	B10	B10	📼	1d	1d	1d
P 8	B9	B9	VCR	col2	1h	1h
P 9	B8	B8	1a	2a	col1	2a
P10	B7	B7	1b	2b	⇨	2b
P11	B6	B6	1f	2f	VN	2f
P12	B5	B5	1g	2g	LD	2g
P13	B4	B4	1c	2c	SP	2c
P14	B3	B3	1e	2e	S (SEP)	2e
P15	B2	B2	1d	2d	: (SEP)	2d
P16	B1	B1	1h	SVHS	LP (SEP)	REVIEW

4.23 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTES:
1.All parts shown in this schematic are critical for safety.
2.This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

Key No.	Key Name
1	START+
2	1
3	4
4	STOP+
5	DATE+
6	PROG(CH)+
7	3
8	6
9	CANCEL(1-)
10	2
11	7
12	0
13	8
14	TIMER(2-)
15	5
16	9
17	PROG
18	TV
19	VCR
20	PROG CHECK
21	-/--
22	SKIP
23	OPERATE
24	SAT
25	START-
26	TV/VCR
27	RE-VIEW
28	STOP-
29	DATE-
30	PROG(CH)-
31	DISPLAY
32	AUDIO/MUTE
33	MENU
34	REC
35	REW
36	PLAY
37	STOP
38	FF
39	PAUSE
40	OK
41	<</TV VOL-
42	--
43	--
44	--
45	Δ/TV PROG+
46	∇/TV PROG-
47	--
48	>>/TV VOL+
34+36	REC START
34+39	REC PAUSE



4.24 VOLTAGE CHARTS

<VIDEO/N.AUDIO>

MODE PIN NO.	REC	PLAY
IC1		
1	2.5	2.5
2	2.5	2.4
3	0	0
4	2.2	2.4
5	0	0
6	0.4	0.9
7	2.5	2.5
8	–	–
9	2.4	2.5
10	2.4	2.4
11	2.4	2.4
12	5.0	5.0
13	1.9	1.4
14	1.9	1.4
15	2.6	3.0
16	1.5	0.7
17	2.6	2.7
18	2.3	2.1
19	3.0	3.0
20	2.7	2.7
21	2.2	2.3
22	1.9	2.1
23	3.0	3.0
24	2.1	2.1
25	1.4	1.4
26	2.1	2.0
27	0	0
28	2.8	2.8
29	1.9	1.9
30	2.6	2.8
31	2.8	2.8
32	0	0
33	0	0
34	0	0
35	3.1	3.0
36	5.0	5.0
37	0	0
38	5.0	5.0
39	3.1	3.1
40	5.0	5.0
41	5.0	5.0
42	2.0	2.1
43	5.0	5.0
44	2.6	2.6
45	0	0
46	2.0	2.0
47	0	0
48	0	0
49	0	0
50	0.3	0.3
51	0.6	0.6
52	2.4	2.4
53	2.8	2.7
54	2.0	1.9
55	2.0	2.1
56	2.3	2.7
57	0	0
58	3.0	3.0
59	3.5	3.6
60	2.1	2.1
61	5.0	5.0
62	4.8	4.8
63	4.8	4.8
64	0	0
65	2.4	2.4
66	5.0	5.0
67	5.0	5.0
68	0	0
69	2.8	2.8
70	2.8	2.8
71	2.1	2.1
72	0	2.2
73	–	–
74	2.6	1.0
75	–	–
76	2.5	2.5
77	4.8	4.5
78	2.7	2.8
79	4.3	2.1
80	0	0
81	–	2.4
82	1.2	1.1
83	2.5	2.5
84	0	1.1
85	0	0
86	2.4	2.3
87	2.2	2.2
88	2.2	2.2
89	0	2.2
90	5.0	5.0
91	0	0
92	0	0
93	0	0
94	0	0
95	2.8	2.8
96	5.0	5.1
97	0	0
98	5.0	5.0
99	0.6	2.6
100	2.6	2.5
Q1		
E	4.3	4.3
C	0	0
B	3.6	3.6
Q6		
E	2.7	2.7
C	0	0
B	2.1	2.1
Q38		
E	1.7	1.0
C	5.0	5.0
B	2.4	1.6
Q102		
E	0	0
C	0	0
B	0.5	0.5
Q152		
E	5.0	4.9
C	0	0
B	4.3	4.3
Q153		
E	2.0	2.1
C	5.0	5.0
B	2.7	2.7
Q2001		
E	–12.4	0
C	0	0
B	–18.4	0.7
Q2002		
E	–12.3	0
C	0	0
B	–18.2	0.7
Q2003		
E	5.0	5.1
C	–18.3	5.0
B	4.9	0
Q2051		
E	0	0
C	8.1	0.3
B	0.5	0.3
Q2052		
E	11.3	11.4
C	11.2	2.4
B	10.6	11.4
Q2053		
E	0	0
C	0	11.3
B	5.0	0
Q2054		
E	11.2	2.4
C	11.0	0
B	10.4	2.4
Q2055		
E	0	0
C	0	2.4
B	4.9	0
CN1		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.3	2.2
6	2.3	2.2
7	2.2	2.2
8	2.2	2.2
9	4.4	0
10	0	0
11	4.4	0
CN501		
1	2.1	2.2
2	5.0	5.1
3	5.1	5.1
4	5.1	5.1
5	4.2	4.3
6	0	0
7	2.0	2.1
8	1.8	1.8
9	0	0
10	0.4	0.3
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	1.7	2.5
7	2.0	2.5
CN2002		
1	0	0
2	0	0

<FMA>

MODE PIN NO.	REC	PLAY
IC2201		
1	0	0
2	0	0
3	2.5	2.5
4	0	0
5	0	0
6	2.5	2.5
7	0	0
8	2.5	2.5
9	1.5	1.5
10	0	0
11	2.5	2.5
12	2.5	2.5
13	2.5	2.4
14	2.0	2.0
15	2.5	0
16	4.8	4.8
17	4.9	4.8
18	0	2.8
19	0	0
20	0	0
21	0	2.7
22	–	–
23	0	0
24	2.0	2.1
25	2.5	2.4
26	2.5	2.5
27	0	2.5
28	0	0
29	1.6	1.5
30	2.6	2.5
31	5.0	5.0
32	0	0
33	2.5	2.5
34	0	0
35	0	0
36	0	0
37	2.4	2.5
38	2.5	2.5
39	9.3	9.4
40	0	0.5
41	4.3	4.3
42	0	0
43	0	0
44	0	0
45	4.3	4.3
46	4.6	4.4
47	3.6	3.1
48	1.0	3.0
IC2251		
1	0	–
2	4.4	0
3	0.5	0.6
4	0	0
5	0.6	0.6
6	4.4	0
7	0	0
8	2.5	2.5
9	0	0
10	5.0	5.0
11	3.0	3.1
12	0	0
13	1.9	0.9
14	1.9	1.9
15	0	0
16	4.5	0.9
Q2251		
E	4.4	0
C	4.5	0.9
B	0.5	0.4
Q2254		
E	0	0
C	0	0
B	5.0	5.0
Q2255		
E	5.0	5.1
C	5.0	5.0
B	0	0
Q2711		
E	0	0
C	0	0
B	–0.1	0
Q2712		
E	0	0
C	0	0
B	0	0
Q2713		
E	5.8	5.8
C	0	0
B	5.8	5.8
Q2714		
E	0	0
C	5.8	5.8
B	0	0
CN2701		
1	0	0
2	0	0
3	0	0
4	0	0
5	11.3	11.3
6	0	0
7	0	0
8	0	0

<SYSCON>

MODE PIN NO.	REC	PLAY
IC3001		
1	1.0	3.0
2	3.6	3.1
3	0	0
4	5.0	5.0
5	0	0
6	0	0
7	–	–
8	–	–
9	0	0
10	–	–
11	–	–
12	5.1	5.1
13	0	0
14	0	0
15	4.9	0
16	5.1	5.1
17	0	0
18	0	0
19	5.1	5.0
20	0	0
21	0	0
22	5.1	5.0
23	0	0
24	0	0
25	0	0
26	0	0.3
27	0	0
28	0.8	0.7
29	2.1	2.3
30	4.4	4.4
31	0.4	0.4
32	0.4	0.4
33	0.7	0.9
34	0	0
35	0.4	0
36	0.3	0.4
37	0	0
38	0.3	0.3
39	5.0	0
40	2.1	0
41	5.1	5.0
42	0	0
43	0	0
44	5.0	5.0
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	5.1	5.0
51	0	0
52	0	0
53	0	0
54	0	0
55	0	0
56	–	–
57	1.3	1.2
58	5.1	5.1
59	4.7	4.6
60	0	0
61	4.5	4.6
62	0	0
63	5.1	5.1
64	0	0
65	0	0
66	–	–
67	–	0
68	0	0
69	3.3	–
70	–	–
71	–	–
72	5.1	5.1
73	5.1	5.1
74	0	5.1
75	5.1	5.1
76	5.1	5.1
77	4.5	4.5
78	0	0
79	0	0
80	0	0
IC3002		
1	0	0
2	12.2	12.2
3	0	0
4	–	–
5	0	0
6	12.2	12.2
7	0	0
8	12.1	12.2
9	0	0
IC3003		
1	0	0
2	5.1	5.1
3	0	5.1
IC3004		
1	0	0
2	0	0
3	0	0
4	0	0
5	–	–
6	–	–
7	0	0
8	5.1	5.1
IC3301		
1	0	0
2	0	1.2
3	5.0	5.0
4	5.1	5.1
5	0	0
6	0	0
7	–	–
8	5.1	5.1
9	0	0
10	–	–
11	–	–
12	4.6	4.6
13	0	0
14	5.0	5.1
15	5.1	5.1
16	0	0
17	0	0
18	0	0
19	4.6	4.7
20	4.9	5.0
21	4.8	4.7
22	–	–
23	–	–
24	3.2	0
25	4.9	4.9
26	0	0
27	0	0
28	0	0
29	–	–
30	0.7	0.8
31	0	0
32	5.1	5.1
33	0	0
34	0.3	0.3

MODE PIN NO.	REC	PLAY
35	0.3	0.3
36	0	0.3
37	0.4	0.5
38	0	0
39	0.8	0.9
40	0.4	0.3
41	0.4	0.4
42	4.4	4.3
43	5.1	0
44	0	5.1
45	0	0
46	5.0	5.1
47	0	5.1
48	0	0
49	0	0
50	0	0
51	0	0
52	5.1	–
53	0	0
54	0	0
55	0	0
56	0	0
57	5.1	5.1
58	0	0
59	5.1	5.1
60	0	0
61	0	0
62	0	0
63	5.1	5.1
64	0	0
65	0	0
66	0	0
67	5.1	5.1
68	5.1	5.0
69	0	0
70	5.1	5.1
71	–	–
72	5.1	5.1
73	5.1	5.1
74	2.7	2.8
75	1.5	1.5
76	2.5	2.5
77	0	0
78	0	0
79	0	0
80	4.3	4.3
Q3001		
E	0	0
C	4.6	4.7
B	–	–
Q3002		
E	0	0
C	4.9	5.1
B	–	–
Q3003		
E	0	0
C	0	0
B	0.7	0.7
Q3005		
E	0	0
C	12.3	12.2
B	0	0
CN3001		
1	0	0
2	2.5	2.5
3	2.5	2.5
4	5.0	5.0
5	11.5	11.5
6	0	0
7	–	–
8	0	0
CN3003		
1	4.9	0
2	3.3	0
CN3004		
1	5.1	5.1
2	5.1	5.1
3	0	0
4	0	0
CN3005		
1	5.1	5.1
2	5.1	5.1
3	4.7	4.7
4	5.1	5.1
5	1.4	–
6	4.6	4.6
7	5.1	5.1
8	0	0
9	0	0

MODE PIN NO.	REC	PLAY
10	–20.2	–20.2
11	–16.7	–16.7
12	–29.0	–29.0
CN3006		
1	5.1	5.1
2	5.1	5.1
3	0	0
4	0	0
5	4.9	4.9
6	0	0
7	4.9	4.9

<SWITCHING REGULATOR>

MODE PIN NO.	REC	PLAY
Q5101		
S	0	0
D	171.2	169.9
G	5.9	5.7
Q5102		
E	0	0
C	5.9	5.7
B	0	0
Q5301		
E	20.3	21.4
C	11.4	11.5
B	20.2	21.2
Q5302		
E	0	0
C	20.2	20.9
B	0	0
Q5303		
E	12.2	12.2
C	11.6	11.6
B	10.9	10.9
Q5304		
E	0	0
C	0	0
B	4.6	4.5
Q5305		
E	0	0
C	11.0	11.0
B	0.5	0.6
Q5306		
E	5.2	5.2
C	6.0	6.0
B	5.8	5.8
Q5312		
E	–14.5	–14.5
C	–14.8	–14.8
B	–15.3	–15.3
Q5313		
E	0	0
C	0	0
B	4.2	4.2
Q5314		
E	31.2	31.2
C	31.1	31.1
B	30.5	30.5
Q5315		
E	5.2	5.1
C	5.9	5.9
B	5.8	5.8
Q5316		
E	0	0
C	5.8	5.8
B	0.6	0.6
Q5319		
E	11.3	11.4
C	12.2	12.3
B	12.0	12.1
Q5320		
E	12.2	12.3
C	12.2	12.2
B	0	0
Q5321		
E	12.2	12.3
C	12.2	12.1
B	0.6	0.6
Q5322		
E	11.6	11.6
C	12.2	12.3
B	12.2	12.2
Q5451		
E	–	–
C	–	–
B	–	–

MODE PIN NO.	REC	PLAY
Q5452		
E	–	–
C	–	–
B	–	–

<TUNER>

MODE PIN NO.	REC	PLAY
IC6080		
1	1.2	1.2
2	1.5	1.2
3	4.5	4.5
4	0	0
5	7.5	7.5
6	7.4	7.5
7	7.5	7.5
8	9.0	9.0
Q6001		
E	9.0	9.0
C	11.3	11.3
B	9.6	9.6
Q6030		
E	1.8	1.8
C	0	0
B	1.1	1.1
Q6031		
E	0	0
C	1.1	1.1
B	4.1	4.1
CN6701(HR-J758EH)		
1	–	–
2	–	–
3	0	0
4	5.1	5.1
5	11.3	11.3
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	4.1	4.1
UN6701 (HR-J758E)		
1	–	–
2	–	–
3	0	0
4	5.1	5.1
5	11.3	11.4
6	0	0
7	0	0
8	0	0
9	0	0
10	3.0	3.0
11	4.6	4.6

<SERVO>

MODE PIN NO.	REC	PLAY
IC4001		
1	0	0
2	0.3	0.3
3	2.4	2.4
4	0	0
5	3.1	0
6	5.1	–
7	1.6	1.6
8	3.0	3.0
9	5.1	5.1
10	2.5	2.5
11	2.5	2.5
12	2.5	2.5
13	1.7	2.5
14	2.8	2.5
15	2.5	2.5
16	0	0
17	2.4	2.4
18	0	0
19	0.5	0.5
20	0	–
21	–	–
22	1.7	1.6
23	5.0	5.1
24	–	–
CN4001		
1	12.2	12.2
2	0	0

MODE PIN NO.	REC	PLAY
3	1.5	1.5
4	1.5	1.5

<TERMINAL MAIN>

MODE PIN NO.	REC	PLAY
CN7104		
1	1.6	1.6
2	0	0
3	0	0
4	5.1	5.1
5	2.2	2.2
6	5.0	5.1
7	2.8	2.8
8	5.1	5.1
9	–	–
10	1.5	1.6
11	4.7	4.7
CN7105		
1	0	0
2	1.8	1.7
3	11.5	11.5
4	0	0
5	1.1	1.1
6	0	0
7	0	0
8	0	0
9	11.3	11.4
10	–	–
11	–	–
12	0	0
13	0	5.1
CN7106		
1	–	–
2	–	–
3	–12.6	–12.6
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
CN7162		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	–	–
7	–	–
J7108		
1	0	0
2	0	0
3	0	0

<TERMINAL>

MODE PIN NO.	REC	PLAY
IC7131		
1	1.6	1.6
2	0	0
3	1.6	1.6
4	11.5	11.5
5	1.6	1.6
6	0	0
7	–	–
8	0	11.5
9	–	–
10	0.4	0.5
11	–	–
12	0	0
13	–	–
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	11.5	11.5
20	1.8	1.8
21	1.0	1.1
22	–	–

MODE PIN NO.	REC	PLAY
23	2.5	2.6
24	2.0	2.0
IC7132		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	6.6	6.6
7	–11.0	–11.1
8	11.6	11.5
9	6.6	6.6
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
Q7131		
E	2.8	2.9
C	0	0
B	2.2	2.2
CN7101		
1	0	0
2	1.8	1.7
3	11.5	11.5
4	0	0
5	1.1	1.1
6	0	0
7	0	0
8	0	0
9	11.3	11.4
10	–	–
11	–	–
12	0	0
13	0	5.1
CN7102		
1	–	–
2	–	–
3	–12.6	–12.6
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
CN7103		
1	1.6	1.6
2	0	0
3	0	0
4	5.1	5.1
5	2.2	2.2
6	5.0	5.1
7	2.8	2.8
8	5.1	5.1
9	–	–
10	1.5	1.6
11	4.7	4.7
J7101		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	11.5
9	0	0
10	–	–
11	0	0
12	–	–
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	1.3	1.3
20	0	0
21	0	0
J7102		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0

MODE PIN NO.	REC	PLAY
6	0	0
7	0	0
8	0	0
9	0	0
10	–	–
11	0	0
12	–	–
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	1.8	1.8
20	0	0
21	0	0
J7103		
1	0	0
2	0	0
J7104		
1	0	0
2	0	0

<ON SCREEN>

MODE PIN NO.	REC	PLAY
IC201		
1	0	0
2	2.7	2.7
3	5.1	5.1
4	0	0
5	–	–
6	–	–
7	–	–
8	5.1	5.1
9	–	–
10	4.7	4.7
11	1.5	1.4
12	5.1	5.1
13	5.1	5.1
14	2.9	2.9
15	0	0
16	1.2	1.2
17	2.6	2.6
18	5.1	5.1
19	2.1	2.2
20	0	0
21	2.2	2.2
22	1.7	1.7
23	5.1	5.1
24	3.0	3.0
25	2.6	2.6
26	–	–
27	5.1	5.1
28	3.7	3.7
29	5.1	5.1
30	5.1	5.1
Q203		
E	1.5	1.6
C	5.1	5.1
B	2.2	2.2

<DEMODULATOR> (HR-J758EH)

MODE PIN NO.	REC	PLAY
IC6701		
1	–	–
2	–	–
3	–	–
4	–	–
5	5.1	5.1
6	5.1	5.1
7	–	–
8	–	–
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
15	–	–
16	5.1	5.1
17	0	0
18	–	–

MODE PIN NO.	REC	PLAY
19	–	–
20	4.7	4.8
21	–	–
22	–	–
23	0	0
24	0	0
25	0	0
26	0	0
27	–	–
28	–	–
29	0	0
30	–	–
31	–	–
32	–	–
33	8.3	8.3
34	7.4	7.4
35	–	–
36	3.7	3.7
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	2.6	2.6
44	3.2	3.2
45	0	0
46	5.1	5.0
47	1.5	1.5
48	1.5	1.5
49	0	0
50	0	0
51	2.3	2.3
52	2.0	2.0
Q6701		
E	8.3	8.3
C	11.3	11.4
B	8.9	8.9
Q6702		
E	2.9	2.9
C	8.3	8.3
B	3.7	3.6
Q6704		
E	0	0
C	0	0
B	3.0	3.0
Q6705		
E	0	0
C	0	0
B	3.0	3.0
CN6701		
1	–	–
2	–	–
3	0	0
4	5.1	5.1
5	11.3	11.3
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	4.1	4.1

<DEMODULATOR> (HR-J758E)

MODE PIN NO.	REC	PLAY
IC6701		
1	2.6	2.6
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	2.3	2.2
8	2.4	2.4
9	2.1	2.1
10	2.3	2.2
11	2.6	2.7
12	4.4	4.4
13	0	0
14	5.1	5.1
15	2.6	2.6
16	–	–
IC6702		
1	–	–
2	3.5	3.5
3	2.8	2.8

MODE PIN NO.	REC	PLAY
4	2.6	2.6
5	2.6	2.6
6	2.6	2.6
7	2.6	2.6
8	2.6	2.6
9	–	–
10	–	–
11	–	–
12	–	–
13	2.5	2.6
14	2.6	2.6
15	2.5	2.5
16	0	0
17	2.6	2.6
18	5.1	5.1
19	3.3	3.3
20	–	–
Q6701		
E	0	0
C	0	0
B	3.9	3.9
Q6702		
E	0	0
C	0	0
B	3.9	3.9
CN6701		
1	–	–
2	–	–
3	0	0
4	5.1	5.1
5	11.3	11.4
6	0	0
7	0	0
8	0	0
9	0	0
10	3.0	3.0
11	4.6	4.6

<SPATIALIZER>

MODE PIN NO.	REC	PLAY
IC2701		
1	4.5	4.5
2	4.5	4.5
3	4.5	4.6
4	–	–
5	4.6	4.6
6	4.6	4.6
7	4.6	4.6
8	0	0
9	4.6	4.5
10	0.7	0.7
11	0.7	0.7
12	9.1	9.1
13	0.6	0.6
14	0.3	0.3
15	–	–
16	4.6	4.6
17	2.9	2.9
18	8.2	8.3
19	4.6	4.6
20	0	0
Q2701		
E	9.1	9.1
C	11.3	11.4
B	9.7	9.7
CN2702		
1	0	0
2	0	0
3	0	0
4	0	0
5	11.3	11.4
6	0	0
7	0	0
8	0	0

<SW/DISPLAY>

MODE PIN NO.	REC	PLAY
IC7001		
1	5.1	5.1
2	2.1	2.1
3	0	0
4	2.1	2.1
5	5.1	5.1

MODE PIN NO.	REC	PLAY
6	4.0	4.0
7	2.6	2.6
8	3.0	3.1
9	3.0	3.0
10	5.1	5.1
11	5.1	5.1
12	4.6	4.6
13	1.4	1.4
14	5.1	5.1
15	4.7	4.8
16	–29.1	–29.0
17	–29.1	–29.0
18	–	–
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–
25	–	–
26	–	–
27	–	–
28	–	–
29	–	–
30	–	–
31	–	–
32	–	–
33	–	–
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–
39	–	–
40	–	–
41	–	–
42	–	–
43	–	–
44	5.1	5.1
IC7002		
1	5.1	5.1
2	5.1	5.1
3	0	0
CN7001		
1	5.1	5.1
2	5.1	5.1
3	4.7	4.7
4	5.1	5.1
5	1.4	–
6	4.6	4.6
7	5.1	5.1
8	0	0
9	0	0
10	–20.2	–20.2
11	–16.7	–16.7
12	–29.0	–29.0
CN7191		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
FW7001		
1	5.1	5.1
2	0	0
J7191		
1	0	0
2	0	0
J7192		
1	0	0
2	0	0
3	0	0
J7193		
1	0	0
2	0	0
3	0	0

<JOG>

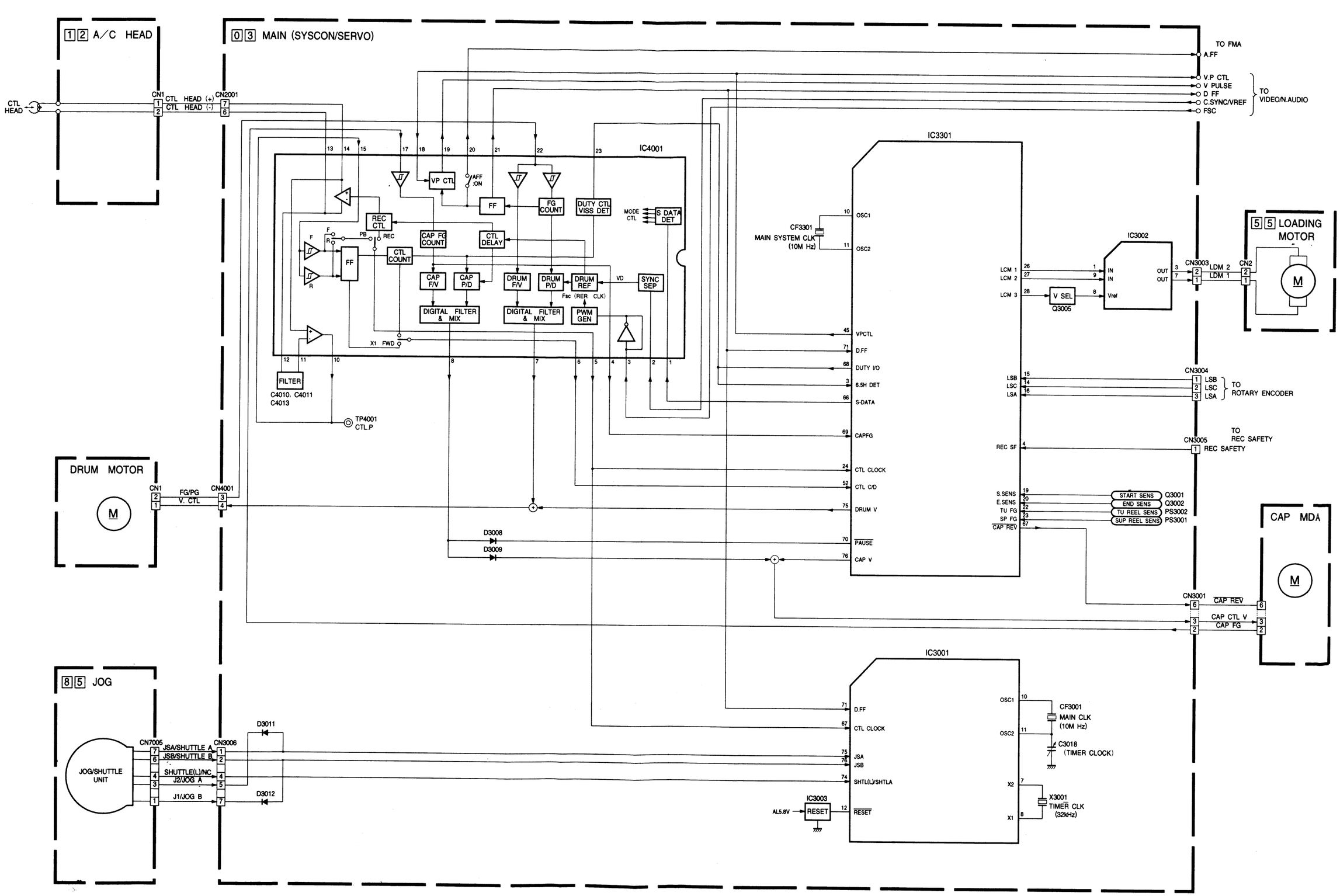
MODE PIN NO.	REC	PLAY
CN7005		
1	4.9	4.9
2	0	0
3	4.9	4.9
4	0	0
5	0	0
6	5.1	5.1

MODE PIN NO.	REC	PLAY
7	5.1	5.1
UN7091		
1	5.1	5.1
2	5.1	5.1
3	0.5	5.1
4	0	0
5	0	0
6	4.9	4.9
7	0	0
8	4.9	4.9

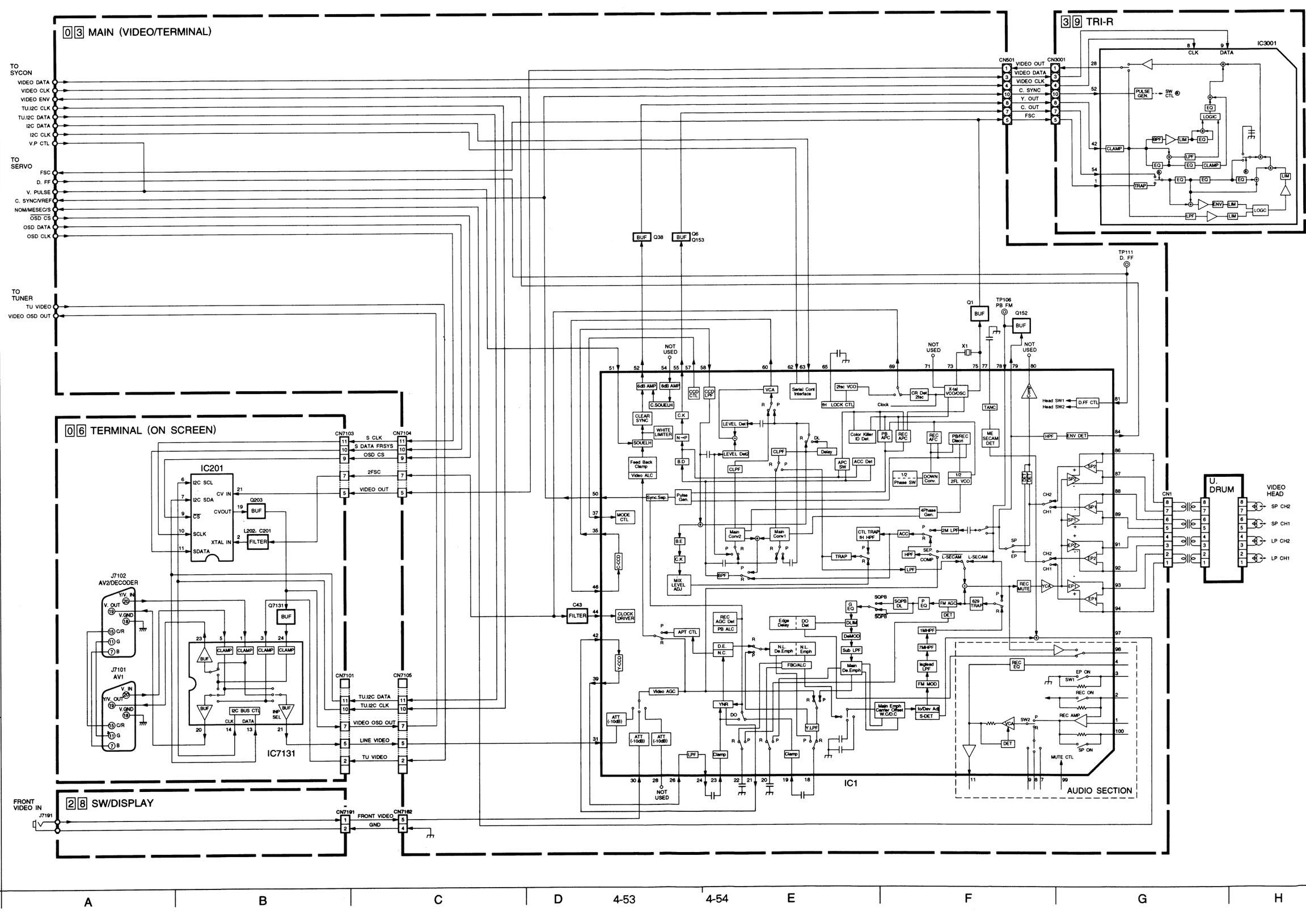
<TRI–R>

MODE PIN NO.	REC	PLAY
IC3001		
1	3.1	3.1
2	3.1	3.1
3	2.4	2.4
4	2.6	2.7
5	2.8	2.8
6	2.8	2.8
7	2.2	2.2
8	5.1	5.1
9	5.1	5.1
10	2.8	2.8
11	2.1	2.2
12	0	0
13	0	0
14	2.1	2.1
15	2.7	2.7
16	2.8	2.8
17	1.9	1.8
18	2.8	2.8
19	0	1.5
20	2.3	2.3
21	5.1	5.1
22	0	0
23	0	0
24	3.0	3.0
25	2.0	2.0
26	2.0	2.0
27	2.2	2.2
28	2.2	2.2
29	3.2	3.2
30	0	0
31	1.0	1.0
32	0	0
33	3.0	3.0
34	0	0
35	3.1	3.1
36	2.1	2.1
37	3.0	3.1
38	2.2	2.1
39	2.3	2.3
40	1.9	1.8
41	2.9	2.9
42	3.5	3.5
43	0	0
44	2.8	2.8
45	2.2	2.2
46	2.8	2.8
47	1.6	1.6
48	0	0
49	1.8	1.6
50	1.4	1.5
51	2.7	2.8
52	0.6	0.6
53	2.7	2.7
54	2.1	2.1
55	0	0
56	5.1	5.0
Q3001		
E	0	0
C	0	1.6
B	0.3	0.3
CN3001		
1	2.1	2.2
2	5.0	5.1
3	5.1	5.1
4	5.1	5.1
5	4.2	4.3
6	0	0
7	2.0	2.1
8	1.8	1.8
9	0	0
10	0.4	0.3

4.25 SYSTEM CONTROL/SERVO BLOCK DIAGRAM

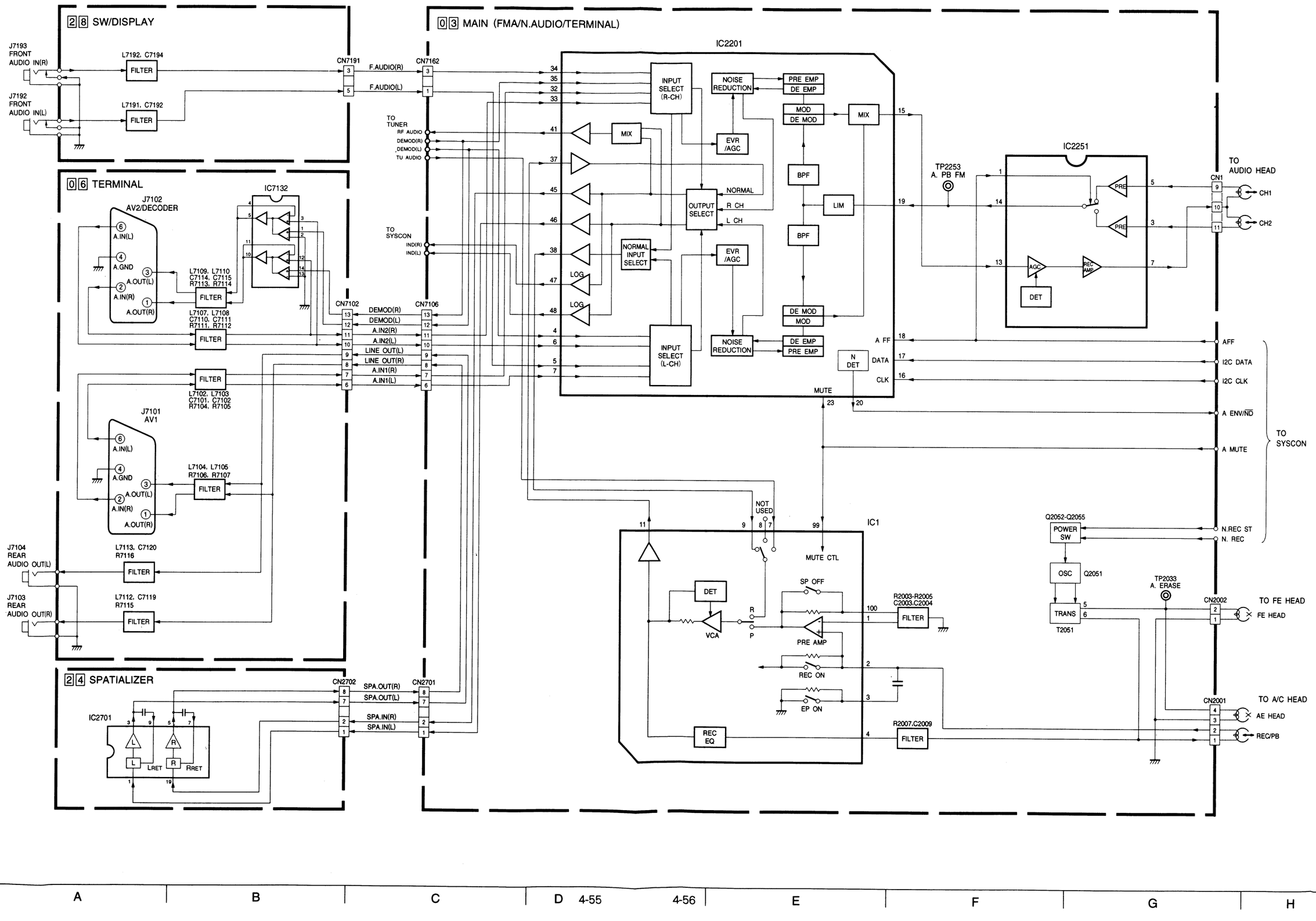


4.26 VIDEO BLOCK DIAGRAM



A B C D 4-53 4-54 E F G H

4.27 AUDIO BLOCK DIAGRAM



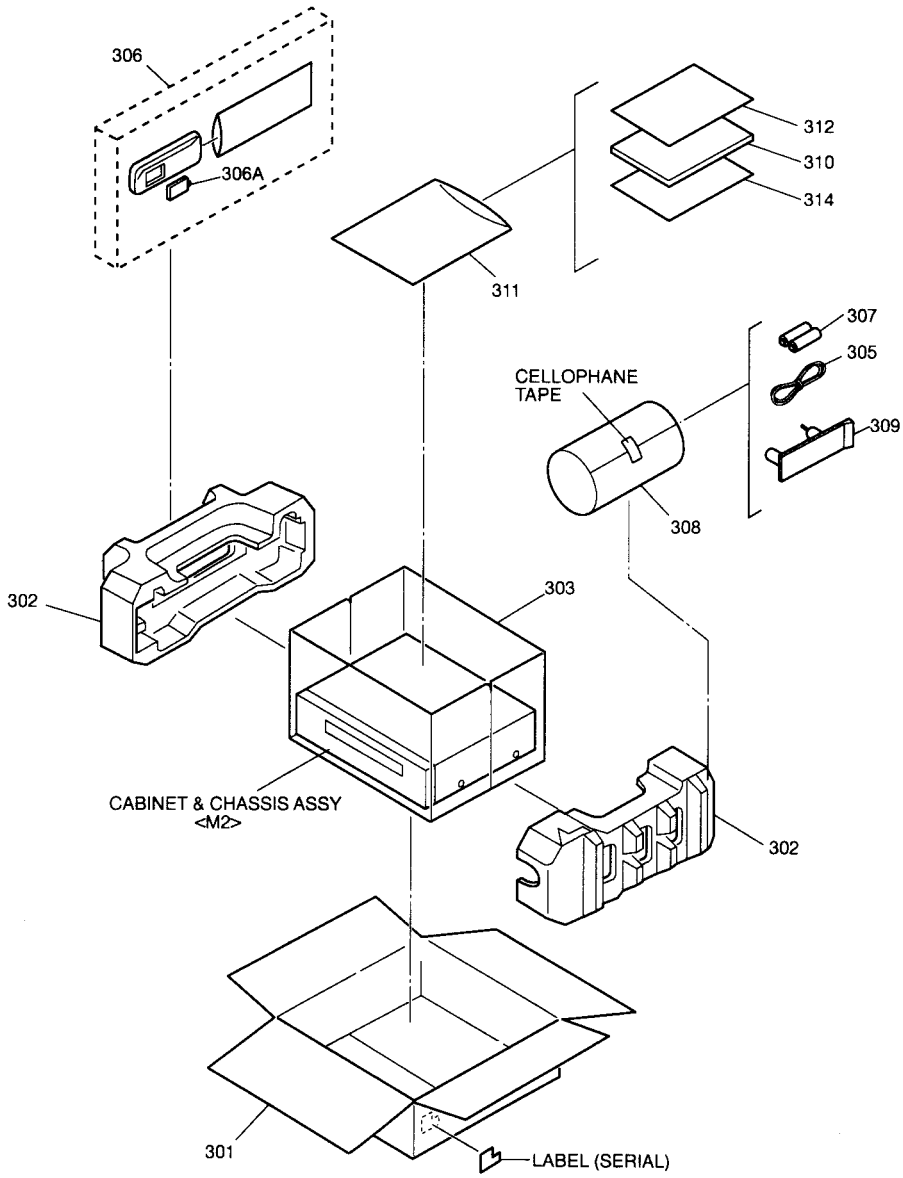
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.



#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

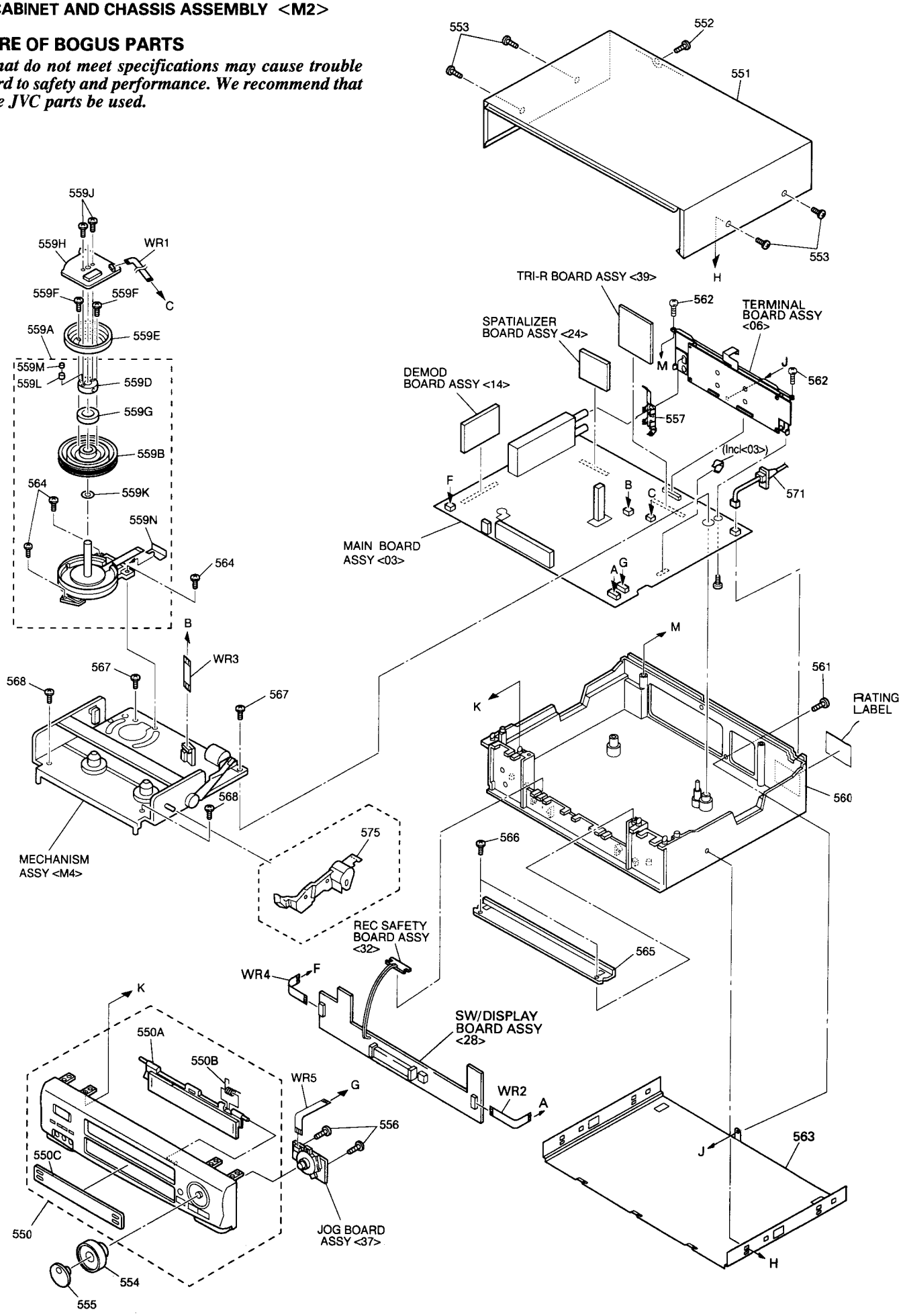
PACKING AND ACCESSORY ASSEMBLY <M1>

	301	LP30423-009B	PACKING CASE,J758E
		LP30423-011B	PACKING CASE,J758EH
	302	LP30424-001C	CUSHION ASSY
	303	PQM30021-93	POLY BAG
	305	PEAC0300-02	RF CABLE
	306	LP20337-004B	REMOTE CONTROLLER
	306A	LP40254-002B	COVER(BATTERY)
	307	R6PRPA-2ST	BATTERY,X2
	308	QPC02202215P	POLY BAG
	309	LP30383-002A	CAP(JACK),CONNECTOR COVER
⚠	310	LPT0048-001A	INST.BOOK(EN)
⚠		LPT0048-002A	INST.BOOK(GE)
⚠		LPT0048-003A	INST.BOOK(FR)
⚠		LPT0048-004A	INST.BOOK(IT),J758E
⚠		LPT0048-005A	INST.BOOK(SP),J758EH
⚠		LPT0048-006A	INST.BOOK(DU)
⚠		LPT0048-007A	INST.BOOK(DA),J758EH
⚠		LPT0048-008A	INST.BOOK(FI),J758EH
⚠		LPT0048-009A	INST.BOOK(SW),J758EH
⚠		LPT0048-010A	INST.BOOK(NO),J758EH
⚠		LPT0048-011A	INST.BOOK(PT),J758EH
⚠		LPT0048-012A	INST.BOOK(GR),J758E
	311	QPC02503515P	POLY BAG
	312	BT-54008-1	GUARANTEE CARD
	314	PQ45146-138	SHEET(SPAIN),J758EH

5.2 CABINET AND CHASSIS ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.



#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

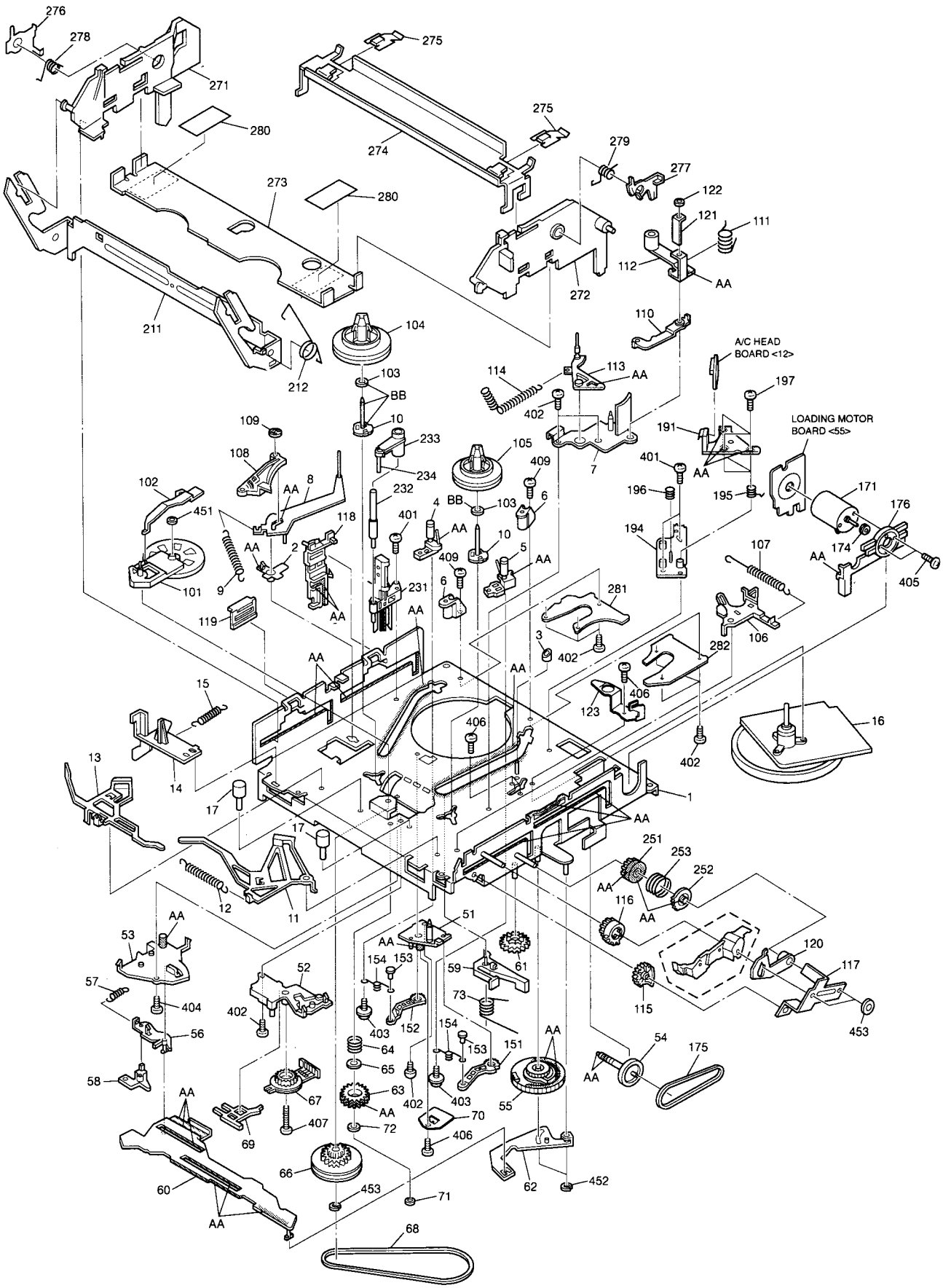
****

CABINET AND CHASSIS ASSEMBLY <M2>

⚠	550	LP10125-006D	FRONT PANEL ASSY,J758E
⚠		LP10125-007D	FRONT PANEL ASSY,J758EH
	550A	LP20342-006B	CASSETTE DOOR
	550B	PQ46448	TORSION SPRING
	550C	LP20343-005A	DISPLAY WINDOW,J758E
		LP20343-006A	DISPLAY WINDOW,J758EH
⚠	551	PQ11676-51	TOP COVER
	552	QYTDSF3010M	SCREW,TOP COVER(REAR)
	553	QYTDSF3010M	SCREW.X4 TOP COVER(SIDE)
	554	LP30120-004A	KNOB SHUTTLE
	555	LP30121-004A	KNOB JOG
	556	QYTDSF2608Z	SCREW,X2 JOG
	557	PQ21623-1-3	EARTH PLATE(RF)
	559A	LP20289-002A	DRUM SUB ASSY
	559B	LP20030-002A	UPPER DRUM ASSY
	559D	LP40028-001A	COLLAR ASSY
	559E	PDZ0179	ROTOR ASSY
	559F	QYSPSP3006Z	SCREW,X2
	559G	PDM4439	CAP
	559H	PDZ0181-1-2	STATOR ASSY
	559J	QYSPSP2606Z	SCREW,X2
	559K	PDM4444-19-2	WASHER
	559L	LP40323-001A	CONTACT
	559M	LP30004-005A	COMPRESS.SPRING
	559N	LP40174-001B	FPC PLATE
⚠	560	LP10116-003C	BOTTOM CHASSIS
	561	QYTDSF3010M	SCREW,TERMINAL
	562	QYTDSF3010Z	SCREW,X2 TERMINAL
⚠	563	PQ11668-2-9	BOTTOM COVER
	564	QYTPST2608Z	SCREW,X3 DRUM
	565	LP30312-001A	BRACKET(CHASSIS)
	566	QYTDSF3010Z	SCREW,X2 BRACKET(CHASSIS)
	567	QYTDSF4012Z	SCREW,X2 MECHA
	568	QYTDSF3010Z	SCREW,X2 MECHA
⚠	571	QMP4A10-170	POWER CORD
	575	LP20324-002B	DOOR OPENER
	WR1	QUQ212-0420CG	FFC WIRE,DRUM CN4001
	WR2	QUQ112-1214CG	FFC WIRE,SW/DISPLAY CN3005
	WR3	WJT0005-002A	E-CARD WIRE,A/C HEAD CN2001
	WR4	QUQ212-0514CG	FFC WIRE,SW/DISPLAY CN7162
	WR5	QUQ112-0718CG	FFC WIRE,JOG CN3006

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

5.3 MECHANISM ASSEMBLY <M4>



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in **AA** and **BB** indicate lubrication and greasing areas.

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

MECHANISM ASSEMBLY <M4>

		1	LP20228-003D	MAIN DECK ASSY
		2	LP30232-002A	T.ARM BEARING
		3	LP40097-001B	G.POLE CAP
		4	LP40101-002A	P.BASE ASSY(S)
		5	LP40104-002A	P.BASE ASSY(T)
		6	LP30409-002A	UV CATCHER 2,X2
		7	LP20234-001C	LID GUIDE
		8	LP40108-001A	TENSION ARM ASSY
		9	LP30003-010A	TENSION SPRING
		10	LP40123-001A	REEL SHAFT
		11	LP40111-002B	MAIN BRAKE AY (TAKE-UP)
		12	LP30003-002A	TENSION SPRING
		13	LP40110-002D	MAIN BRAKE ASSY (SUPPLY)
		14	LP30245-001C	REC SAFTY LEVER
		15	LP30003-004A	TENSION SPRING
		16	QAR0032-003	CAPSTAN MOTOR
		17	PQ46302-1-3	ADJUST PIN
		51	LP30223-003B	L.A.GEAR SHAFT
		52	LP20233-003B	R.ENCODER GUIDE
		53	LP30226-003B	CTL.PLATE GUIDE
		54	LP40120-001A	WORM GEAR
		55	LP30229-001B	CTL.CAM
		56	LP30249-003B	T.UP LEVER
		57	LP30003-006A	TENSION SPRING
		58	LP40119-002A	T.UP HEAD
		59	LP40113-001A	C.BRAKE ASSY
		60	LP10080-002E	CTL.PLATE
		61	LP30237-002A	CASSETTE GEAR
		62	LP40107-002A	LINK LEVER ASSY
		63	LP40122-001A	DIRECT GEAR
		64	LP40224-001B	COMPRESSION SPRING
		65	LP30017-002A	SPACER,D.GEAR
		66	LP40115-002C	CLUTCH UNIT
		67	QSW0554-002	ROTARY ENCODER
		68	LP30005-005A	BELT,CAP.MOTOR
		69	LP30235-002A	CHANGE LEVER
		70	LP40379-001A	CTL BRACKET(1)
		71	LP30016-001A	SLIT WASHER
		72	LP30017-009A	SPACER,D.GEAR
		73	LP40355-002A	TORSION SPRING
		101	LP40114-002D	IDLER ARM ASSY
		102	LP30236-002A	IDLER LEVER
		104	LP20237-001B	REEL DISK (SUPPLY)
		105	LP20238-001B	REEL DISK (TAKE-UP)
		106	LP40112-001D	S.BRAKE(T)ASSY
		107	LP40357-001B	TENSION SPRING
		108	LP40109-002C	T.BRAKE ASSY
		109	PQ46302-1-3	ADJUST PIN
		110	LP40149-001B	P.LEVER ASSY
		111	LP40148-001A	TORSION SPRING
		112	LP40105-001A	P.R.ARM ASSY
		113	LP40106-001B	GUIDE ARM ASSY
		114	LP40134-001B	TENSION SPRING
		115	LP30243-001B	DRIVE GEAR
		116	LP30242-001A	RELAY GEAR
		117	LP40214-001A	C.H.BRACKET
		118	LP30244-001D	GUIDE RAIL
		119	LP40118-001A	RAIL CAP
		120	LP30339-001A	OPENER GUIDE
		121	LP40382-001A	P.R. SHEET
		122	LP30016-002A	SLIT WASHER
		123	LP30482-001A	P.ROLLER GUIDE
		151	LP40103-002A	L.ARM GEAR(T)
		152	LP30224-001A	L.ARM GEAR(S)
		153	LP40100-001A	PIN,L.ARM GEAR(S)
			LP40100-001A	PIN,L.ARM GEAR(T)
		154	LP40099-001A	TORSION ARM,L.ARM GEAR(S)
			LP40099-001A	TORSION ARM,L.ARM.GEAR(T)
		171	QAR0023-001	LOADING MOTOR
		174	PQ43546-1-2	MOTOR PULLEY
		175	LP30005-003A	BELT,LOADING MOTOR
		176	LP30230-001B	MOTOR GUIDE
		191	QAH0010-002	AC HEAD
		194	LP30228-001A	HEAD BASE
		195	LP30004-012A	COMPRES.SPRINGX3
		196	LP40236-001A	COMPRESSION SPRING
		197	LP40213-002B	SPECIAL SCREW,X3
		211	LP20240-001B	DRIVE ARM
		212	LP40137-001A	TORSION SPRING
		231	NAH0001-001	FULL ERASE HEAD
		232	LP40098-001B	GUIDE POLE(S)
		233	LP30395-001B	T.STUD BASE
		234	LP40367-001A	TENSION STUD
		251	LP30239-002E	LIMIT GEAR(1)
		252	LP30240-002C	LIMIT GEAR(2)
		253	LP40136-001D	TORSION SPRING
		271	LP10081-001C	SIDE HOLDER(L)
		272	LP40403-001B	S.HOLDER(R)ASSY
		273	LP30257-001C	CASSETTE HOLDER
		274	LP20241-001C	TOP PLATE
		275	LP30258-001B	SPRING PLATE
		276	LP30255-001F	LOCK LEVER(L)
		277	LP30256-001D	LOCK LEVER(R)
		278	LP40168-001A	TOR.SPRING(L)
		279	LP40218-001B	TOR.SPRING(R)
		280	LP30019-006C	PAD
		281	LP40275-001A	PLATE(S)
		282	LP40276-001A	PLATE(T)
		401	QYTDST2608Z	SCREW,FE.HEAD
			QYTDST2608Z	SCREW,X2 HEAD BASE
		402	QYTDST2606Z	SCREW,X6 PLATE(S)(T)
			QYTDST2606Z	SCREW,L.A.GEAR
			QYTDST2606Z	SCREW,R.ENCODER GUIDE
			QYTDST2606Z	SCREW,X2 LID GUIDE
		403	QYSPSTG2606Z	SCREW,POLE BASE(S)
			QYSPSTG2606Z	SCREW,POLE BASE(T)
		404	QYTPST2605Z	SCREW,CTL.PLATE GUIDE
		405	QYTPSP3003Z	SCREW,X2 LOADING MOTOR
		406	QYTDSF2608M	SCREW,CTL BRACKET(1)
			QYTDSF2608M	SCREW,X3 CAP.MOTOR
		407	QYTPST2620Z	SCREW,R.ENCODER
		409	QYTPST2606Z	SCREW,X2 UV CATCHER
		451	LP30016-001A	SLIT WASHER
		452	PQM30017-24	SLIT WASHER,CTL.CAM
			PQM30017-24	SLIT WASHER,LINK LEVER
		453	PQM30017-47	SLIT WASHER,CLUTCH GEAR
			PQM30017-47	SLIT WASHER,X2 C.H.BRACKET

5.4 ELECTRICAL PARTS LIST

⚠ REF No.	PART No.	PART NAME, DESCRIPTION
**********		

MAIN BOARD ASSEMBLY <03>

PW1	LPA10014-03B	MAIN BOARD ASSY,J758EH
	LPA10014-04B	MAIN BOARD ASSY,J758E
IC1	JCP8016-MSA	IC
IC2201	AN3665FB-A	IC
⚠ IC2251	AN3328S	IC
IC3001	HD6433929TB37F	QFP IC (MCU)
IC3002	TA7291S	IC
IC3003	S-80728AN-DR-X	IC
IC3004	ST24C08FB6	IC
	or AT24C08-10PC	IC
	or X24C08P	IC
	or 24LC08B/P	IC
IC3301	HD6433926TB27F	QFP IC (MCU)
IC4001	BU2885CS	IC
IC6080	BA15218F-XE	IC
Q1	2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
Q6	2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
Q38	2SD1819A/QRS/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q102	UN5211	TRANSISTOR
	or RN1302	TRANSISTOR
	or DTC114EU	TRANSISTOR
Q152	2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SA1576A/QRS/-X	TRANSISTOR
Q153	2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
Q2001	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2002	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q2003	DTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q2051	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q2052	2SA1576A/QR/-X	TRANSISTOR
	or 2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q2053	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q2054	2SA1576A/QR/-X	TRANSISTOR
	or 2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q2055	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
Q2251	DTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q2254	DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
	or UN5211	TRANSISTOR
Q2255	DTA144WU	TRANSISTOR
	or RN2309	TRANSISTOR
	or UN511E	TRANSISTOR
Q2711	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q2712	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q2713	DTA114EU	TRANSISTOR
	or RN2302	TRANSISTOR
	or UN5111	TRANSISTOR
Q2714	DTC144WU	TRANSISTOR
	or UN521E	TRANSISTOR
	or RN1309	TRANSISTOR
Q3001	PTZ-NV16	PHOTO TRANSISTOR
	or PTZ-NV09	PHOTO TRANSISTOR
Q3002	PTZ-NV16	PHOTO TRANSISTOR
	or PTZ-NV09	PHOTO TRANSISTOR
Q3003	2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
Q3005	2SD1819A/QRS/-X	TRANSISTOR
	or 2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q5101	2SK2632-CB14	POWER MOS FET
	or 2SK2666F04	FE TRANSISTOR
	or 2SK2129-LT	POWER MOS FET
Q5102	2SD2144S/UV/-T	TRANSISTOR
Q5301	2SB1256	TRANSISTOR
Q5302	UN5215	TRANSISTOR
	or DTC114TU	TRANSISTOR
Q5303	2SB1256	TRANSISTOR,J758E
Q5304	UN5211	TRANSISTOR
	or DTC114EU	TRANSISTOR
	or RN1302	TRANSISTOR
Q5305	2SC1740S/RS/-T	TRANSISTOR
	or 2SC3199/YG/-T	TRANSISTOR
Q5306	2SD2144S/UVW/-T	TRANSISTOR
Q5312	2SA1745/6-7/-X	TRANSISTOR,J758E
Q5313	UN5211	TRANSISTOR,J758E
	or RN1302	TRANSISTOR,J758E
	or DTC114EU	TRANSISTOR,J758E
Q5314	2SA1576A/RS/-X	TRANSISTOR,J758E
	or 2SB1218A/RS/-X	TRANSISTOR,J758E
Q5315	2SD2061/F/	TRANSISTOR
Q5316	2SD1819A/RS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SC4081/RS/-X	TRANSISTOR
Q5319	2SC3616/ML/-T	TRANSISTOR
Q5320	UN5111	TRANSISTOR
	or DTA114EU	TRANSISTOR
	or RN2302	TRANSISTOR
Q5321	UN5111	TRANSISTOR,J758E
	or DTA114EU	TRANSISTOR,J758E

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
			or RN2302	TRANSISTOR,J758E
		Q5322	2SD1450/ST/-T	TRANSISTOR
			or 2SD1302/ST/-T	TRANSISTOR
		Q5451	2SB927/ST/-T	TRANSISTOR
		Q5452	DTC144EU	TRANSISTOR
		Q6001	2SC3068	TRANSISTOR
		Q6030	2SB1218A/RS/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SA1576A/RS/-X	TRANSISTOR
		Q6031	DTC114EU	TRANSISTOR
			or RN1302	TRANSISTOR
			or UN5211	TRANSISTOR
		D2001	1N4148M	DIODE
			or 1SS133	DIODE
		D2201	11ES2	DIODE
		D2253	DAP202U	DIODE
		D3001	LNB2301L01VI	LE DIODE
		D3002	11ES2	DIODE
		D3003	11ES2	DIODE
		D3005	RD39ES/B3/-T2	ZENER DIODE
			or UZ39BSC	ZENER DIODE
			or MTZJ39C	ZENER DIODE
		D3007	1SS133	DIODE
			or 1N4148M	DIODE
		D3008	1SS133	DIODE
			or 1N4148M	DIODE
		D3009	1SS133	DIODE
			or 1N4148M	DIODE
		D3011	1SS133	DIODE
			or 1N4148M	DIODE
		D3012	1SS133	DIODE
			or 1N4148M	DIODE
		D5001	S1WB(A)60F4102	BRIDGE DIODE
			or S1WB(A)60F4062X	BRIDGE DIODE
			or S1WB(A)60F4072X	BRIDGE DIODE
		D5101	AU01	FR DIODE
			or ERA18-04-T2	FR DIODE
			or PG104RS	FR DIODE
			or 1SR153-400-T2	FR DIODE
			or 10ELS4	FR DIODE
		D5102	AU01	FR DIODE
			or ERA18-04-T2	FR DIODE
			or PG104RS	FR DIODE
			or 10ELS4	FR DIODE
			or 1SR153-400-T2	FR DIODE
		D5103	1N4148M	DIODE
			or 1SS133	DIODE
		D5105	1SS133	DIODE,J758E
		D5201	ERA18-02-T2	FR DIODE
			or 1SR153-200-T2	FR DIODE
		D5202	FML-12S	FR DIODE
			or FCF06A20	FR DIODE
			or MA644	FR DIODE
			or YG901C2	FR DIODE
		D5206	FMB-24	BARRIER DIODE
			or F5KQ40B	BARRIER DIODE
			or MA7D49	SB DIODE
			or YG801C04	SB DIODE
		D5209	10ELS2	FR DIODE
			or 1SR153-200-T2	FR DIODE
			or ERA18-02-T2	FR DIODE

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
			or PG104RS	FR DIODE	
		D5210	AU01Z	FR DIODE	
			or ERA18-02-T2	FR DIODE	
			or PG104RS	FR DIODE	
			or 1SR153-200-T2	FR DIODE	
			or 10ELS2	FR DIODE	
		D5211	AU01Z	FR DIODE	
			or ERA18-02-T2	FR DIODE	
			or 10ELS2	FR DIODE	
			or PG104RS	FR DIODE	
			or 1SR153-200-T2	FR DIODE	
		D5301	UZ15BSA	ZENER DIODE	
			or MTZJ15A	ZENER DIODE	
			or RD15ES/B1/-T2	ZENER DIODE	
		D5302	11ES2	DIODE	
			or ERA15-02-T2	DIODE	
		D5303	UZ12BSC	ZENER DIODE	
			or RD12ES/B3/-T2	ZENER DIODE	
			or MTZJ12C	ZENER DIODE	
		D5304	1N4148M	DIODE	
			or 1SS133	DIODE	
		D5305	UZ30BSA	ZENER DIODE	
			or MTZJ30A	ZENER DIODE	
			or RD30ES/B1/-T2	ZENER DIODE	
		D5307	UZ6.2BSC	ZENER DIODE	
			or RD6.2ES/B3/-T2	ZENER DIODE	
			or MTZJ6.2C	ZENER DIODE	
		D5308	1SS133	DIODE,J758E	
		D5311	RD5.1JS/B2/-T2	ZENER DIODE,J758E	
			or MA4051N/M/-T2	ZENER DIODE,J758E	
		D5312	1N4148M	DIODE	
			or 1SS133	DIODE	
		D5321	DAN202U	DIODE,J758E	
		D5351	11E2-T5	DIODE	
		D5352	11E2-T5	DIODE	
		D5353	11E2-T5	DIODE	
		D5354	11E2-T5	DIODE	
		D6001	MTZJ10B	ZENER DIODE	
		D6002	HZ30-2L-T2	ZENER DIODE	
			or HZ30-2LTD	Z DIODE (M)	
		R1	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R2	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R3	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R4	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
		R5	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R6	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
		R7	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R9	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R10	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R11	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R13	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R14	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R15	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R16	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R17	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R18	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R19	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R23	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
		R24	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R25	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R52	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R56	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R57	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R59	NRSA02J-125X	MG RESISTOR	1.2MΩ,1/10W
		R60	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R61	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R62	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R68	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R69	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R73	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R120	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R121	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R122	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R123	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R133	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R137	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R138	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R143	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R158	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2001	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2002	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2003	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R2004	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W
		R2005	NRSA02J-121X	MG RESISTOR	120Ω,1/10W
		R2006	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R2007	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R2009	NRSA02J-101X	MG RESISTOR,J758EH	100Ω,1/10W
		R2013	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R2016	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R2018	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2019	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2053	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
		R2054	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R2055	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		R2056	QRE141J-820Y	RESISTOR	82Ω,1/4W
		R2057	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2058	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2059	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2060	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2201	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R2202	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R2203	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2204	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2205	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2206	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2207	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R2208	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2209	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R2210	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2211	NRSA02J-511X	MG RESISTOR	510Ω,1/10W
		R2212	NCB21EK-683X	CAPACITOR	0.068μF,25V
		R2213	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2214	NRSA02J-511X	MG RESISTOR	510Ω,1/10W
		R2215	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R2216	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2217	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R2218	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2219	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2220	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2221	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2222	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R2223	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R2224	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R2225	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2226	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2228	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2229	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2251	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R2253	NRSA02J-270X	MG RESISTOR	27Ω,1/10W
		R2254	NRSA02J-220X	MG RESISTOR	22Ω,1/10W
		R2256	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2258	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2259	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R2260	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R2711	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2712	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2713	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2714	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2715	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2716	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3001	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3002	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3003	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3004	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3010	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R3014	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3015	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3016	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3017	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3019	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3020	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3021	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3022	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3023	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3024	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3025	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R3031	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3032	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3033	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3034	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3035	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3036	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3037	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3038	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3039	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3040	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R3041	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3042	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3043	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3044	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3045	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3046	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3047	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3048	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3049	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3050	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3051	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3052	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3053	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3054	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
		R3055	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3056	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3057	NRSA02J-471X	MG RESISTOR	470Ω,1/10W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R3058	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3059	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
	R3060	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3061	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3062	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3064	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3067	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3068	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3069	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
	R3070	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
	R3071	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3073	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3074	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3075	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3076	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3077	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3078	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3079	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3080	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
	R3201	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
	R3203	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
	R3204	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
	R3205	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3206	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3207	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3209	QRE141J-181Y	RESISTOR	180Ω,1/4W
	R3210	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
	R3211	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
	R3212	NRSA02J-181X	MG RESISTOR	180Ω,1/10W
	R3213	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
	R3214	NRSA02J-181X	MG RESISTOR	180Ω,1/10W
	R3215	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
	R3220	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3223	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3224	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3225	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
	R3226	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3227	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
	R3228	NRSA02J-474X	MG RESISTOR	470kΩ,1/10W
	R3229	NRSA02J-334X	MG RESISTOR	330kΩ,1/10W
	R3230	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3231	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3232	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3233	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3234	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3235	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
	R3236	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
	R3237	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3238	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3239	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3240	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3241	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3242	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3243	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3244	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3246	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3249	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3250	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3253	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3255	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3256	NRSA02J-391X	MG RESISTOR	390Ω,1/10W
	R3257	NRSA02J-391X	MG RESISTOR	390Ω,1/10W
	R3301	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3302	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3303	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3304	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3310	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
	R3314	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3315	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3316	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3317	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3318	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3319	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3320	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3321	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
	R3322	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3323	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3324	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3325	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3326	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R3327	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R3331	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3343	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3344	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3345	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3346	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3347	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3348	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3352	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3357	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3358	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3359	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3360	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3361	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3362	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3365	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3366	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3367	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3368	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3369	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3370	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3371	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3373	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3374	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R3375	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R3376	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3378	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3380	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
	R3501	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3502	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3503	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3504	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3505	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3506	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3507	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3508	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3509	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R3510	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R4001	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
	R4003	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
	R4005	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R4007	NRSA02J-821X	MG RESISTOR	820Ω,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R4008	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R4009	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R4011	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4012	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4013	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R4014	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R4015	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5101	QRE141J-334Y	RESISTOR	330kΩ,1/4W
		R5102	QRE141J-334Y	RESISTOR	330kΩ,1/4W
		R5103	QRE141J-683Y	RESISTOR	68kΩ,1/4W
		R5104	QRG029J-154G	OMF RESISTOR	150kΩ,2W
		R5106	QRT01DJ-R39X	MF RESISTOR	0.39Ω,1W
		R5107	QRE121J-331Y	RESISTOR	330Ω,1/2W
		R5108	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R5109	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
		R5110	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W
		R5111	NRSA02J-821X	MG RESISTOR	820Ω,1/10W
		R5112	QRE141J-221Y	RESISTOR,J758E	220Ω,1/4W
		R5301	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		R5302	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		R5303	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		R5304	NRSA02J-3R9X	MG RESISTOR	3.9Ω,1/10W
		R5305	QRE141J-102Y	RESISTOR,J758E	1kΩ,1/4W
		R5307	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5308	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R5309	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R5310	NRSA02J-472X	MG RESISTOR,J758E	4.7kΩ,1/10W
		R5311	NRSA02J-222X	MG RESISTOR,J758E	2.2kΩ,1/10W
		R5312	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5313	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
	⚠	R5314	QRZ9005-470X	FUSI RESISTOR	47Ω,1/4W
		R5315	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
		R5316	QRA14CF-2211Y	CMF RESISTOR	2.21kΩ,1/4W
		R5317	QRA14CF-3481Y	CMF RESISTOR	3.48kΩ,1/4W
		R5319	QRE141J-511Y	RESISTOR	510Ω,1/4W
		R5320	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5328	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R5330	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R5331	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R5332	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R5335	NRSA02J-472X	MG RESISTOR,J758E	4.7kΩ,1/10W
		R5336	NRSA02J-222X	MG RESISTOR,J758E	2.2kΩ,1/10W
		R5337	NRSA02J-222X	MG RESISTOR,J758E	2.2kΩ,1/10W
		R5338	NRSA02J-273X	MG RESISTOR,J758E	27kΩ,1/10W
		R5339	NRSA02J-273X	MG RESISTOR,J758E	27kΩ,1/10W
		R5340	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5341	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5342	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5343	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5348	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5349	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R5350	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R5351	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R5352	NRSA02J-473X	MG RESISTOR,J758E	47kΩ,1/10W
		R5451	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5452	QRE123J-331X	RESISTOR	330Ω,1/2W
		R6001	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R6002	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6020	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6021	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6022	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R6023	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6030	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6032	NRSA02J-472X	MG RESISTOR,J758EH	4.7kΩ,1/10W
		R6033	NRSA02J-182X	MG RESISTOR,J758EH	1.8kΩ,1/10W
		R6051	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6052	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6053	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R6054	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6071	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6084	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R6085	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R7168	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
		C1	QEKC1CM-106	E CAPACITOR	10μF,16V
		C3	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C5	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6	NCB11EK-104X	CAPACITOR	0.1μF,25V
		C7	QEKC0JM-107	E CAPACITOR	100μF,6.3V
		C9	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C11	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C12	NCB21CK-473X	CAPACITOR	0.047μF,16V
		C13	QEKC1HM-335	E CAPACITOR	3.3μF,50V
		C14	NCB21EK-333X	CAPACITOR	0.033μF,25V
		C16	NCF21CZ-105X	CAPACITOR	1μF,16V
		C17	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C20	NCF21CZ-225X	CAPACITOR	2.2μF,16V
		C21	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C23	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C24	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C25	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C27	NDC21HJ-101X	CAPACITOR	100pF,50V
		C29	NBE20JM-475X	T CAPACITOR	4.7μF,6.3V
		C30	NBE20JM-475X	T CAPACITOR	4.7μF,6.3V
		C31	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C32	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C34	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C37	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C38	NDC21HJ-8R0X	CAPACITOR	8pF,50V
		C39	NDC21HJ-220X	CAPACITOR	22pF,50V
		C41	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C42	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C43	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C44	NDC21HJ-101X	CAPACITOR	100pF,50V
		C45	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C46	NDC21HJ-101X	CAPACITOR	100pF,50V
		C47	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C48	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C49	NDC21HJ-331X	CAPACITOR	330pF,50V
		C51	QEPF1HM-105	NP E CAPACITOR	1μF,50V
		C52	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C54	QEKJ1HM-225	E CAPACITOR	22μF,50V
		C55	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C56	QEKJ1HM-335	E CAPACITOR	3.3μF,50V
		C57	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C58	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C59	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C61	NDC21HJ-390X	CAPACITOR	39pF,50V
		C62	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C63	NDC21HJ-151X	CAPACITOR	150pF,50V
		C64	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C65	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C73	NCB21HK-103X	CAPACITOR	0.01μF,50V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C74	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C81	NDC21HJ-150X	CAPACITOR	15pF,50V
		C82	NDC21HJ-150X	CAPACITOR	15pF,50V
		C83	NDC21HJ-150X	CAPACITOR	15pF,50V
		C84	NDC21HJ-150X	CAPACITOR	15pF,50V
		C91	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C98	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C104	NDC21HJ-330X	CAPACITOR	33pF,50V
		C105	QDYB1CN-103Y	CAPACITOR	0.01μF,16V
		C107	NDC21HJ-5R0X	CAPACITOR	5pF,50V
		C108	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C118	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C127	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C129	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C133	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C134	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C141	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C143	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C164	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C165	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C2002	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2003	NCB21HK-123X	CAPACITOR	0.012μF,50V
		C2004	QEKJ1CM-226	E CAPACITOR	22μF,16V
		C2005	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C2006	NCB21HK-331X	CAPACITOR	330pF,50V
		C2007	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2008	NCB21HK-152X	CAPACITOR	0.0015μF,50V
		C2009	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2010	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2011	NCB21EK-333X	CAPACITOR,J758EH	0.033μF,25V
		C2013	NCB21EK-333X	CAPACITOR	0.033μF,25V
		C2015	QEKJ1CM-226	E CAPACITOR	22μF,16V
		C2016	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2051	NCB21HK-331X	CAPACITOR	330pF,50V
		C2052	QFV61HJ-823	F CAPACITOR	0.082μF,50V
		C2053	NCB21HK-472X	CAPACITOR	0.0047μF,50V
		C2054	NCB21EK-223X	CAPACITOR	0.022μF,25V
		C2055	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2202	QETC1CM-226	E CAPACITOR	22μF,16V
		C2205	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C2207	NCB21CK-473X	CAPACITOR	0.047μF,16V
		C2208	QETC1CM-476	E CAPACITOR	47μF,16V
		C2209	QETC1HM-225	E CAPACITOR	2.2μF,50V
		C2210	QETC1CM-476	E CAPACITOR	47μF,16V
		C2211	NCB21HK-153X	CAPACITOR	0.015μF,50V
		C2212	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2213	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2214	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2216	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C2217	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2218	NCB21HK-153X	CAPACITOR	0.015μF,50V
		C2219	QETC1CM-476	E CAPACITOR	47μF,16V
		C2220	QETC1HM-225	E CAPACITOR	2.2μF,50V
		C2221	NCB21CK-473X	CAPACITOR	0.047μF,16V
		C2222	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2224	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C2227	QEKJ1HM-224	E CAPACITOR	0.22μF,50V
		C2228	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2229	QEKJ1CM-226	E CAPACITOR	22μF,16V
		C2230	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2231	QETC1HM-106	E CAPACITOR	10μF,50V
		C2232	QETC1HM-106	E CAPACITOR	10μF,50V
		C2233	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C2234	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C2236	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2251	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2252	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2253	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2254	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2255	NCB21CK-104X	CAPACITOR	0.1μF,16V
		C2256	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2257	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2258	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C2260	NDC21HJ-221X	CAPACITOR	220pF,50V
		C2261	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3001	QEKJ1CM-336	E CAPACITOR	33μF,16V
		C3004	QEZ0244-229	EDL CAPACITOR	0.0022F
		C3006	NCB21CK-473X	CAPACITOR	0.047μF,16V
		C3012	NDC21HJ-102X	CAPACITOR	0.001μF,50V
		C3015	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C3016	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3017	NDC21HJ-180X	CAPACITOR	18pF,50V
		C3018	QAT7001-450Z	TRIM CAPACITOR,TIMER CLOCK	
		C3022	NCB21CK-473X	CAPACITOR	0.047μF,16V
		C3025	QEKJ1HM-106	E CAPACITOR	10μF,50V
		C3026	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3027	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3034	NCB21HK-221X	CAPACITOR	220pF,50V
		C3042	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C3043	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C3306	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3307	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C4001	NDC21HJ-101X	CAPACITOR	100pF,50V
		C4002	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C4003	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C4004	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C4005	NDC21HJ-470X	CAPACITOR	47pF,50V
		C4006	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C4007	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C4008	NCB21EK-103X	CAPACITOR	0.01μF,25V
		C4010	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C4011	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
		C4013	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C4015	NCB21HK-222X	CAPACITOR	0.0022μF,50V
		C4017	NCB21CK-563X	CAPACITOR	0.056μF,16V
		C4018	NDC21HJ-221X	CAPACITOR	220pF,50V
	⚠	C5001	QFZ9051-683	F CAPACITOR	0.068μF,250V
	⚠	C5002	QFZ9051-333	F CAPACITOR	0.033μF,250V
	⚠	C5005	QCZ9071-222	CAPACITOR	0.0022μF,400V
		C5006	QEZ0374-686	E CAPACITOR	68μF,400V
		C5101	QCZ0212-472	CAPACITOR	0.0047μF,1kV
		C5102	QCZ0302-330Z	CAPACITOR	33pF,1kV
		C5104	QETC1HM-105	E CAPACITOR	1μF,50V
		C5105	QFN31HJ-183	F CAPACITOR	0.018μF,50V
		C5106	QCBB1HJ-271	CAPACITOR	270pF,50V
		C5107	QFVF1HJ-104Z	F CAPACITOR	0.1μF,50V
		C5201	QEMU0JM-227	E CAPACITOR	220μF,6.3V
		C5202	QEMT1CM-827	E CAPACITOR	820μF,16V
		C5203	QETC1CM-227	E CAPACITOR	220μF,16V
		C5204	QEMT1AM-687	E CAPACITOR	680μF,10V
		C5205	QETC1AM-227	E CAPACITOR	220μF,10V
		C5206	QEMU1EM-187	E CAPACITOR	180μF,25V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C5207	QETC1JM-106	E CAPACITOR	10μF,63V
		C5208	QETC1HM-106	E CAPACITOR	10μF,50V
		C5301	QETC1AM-107	E CAPACITOR	100μF,10V
		C5302	QETC1HM-106	E CAPACITOR	10μF,50V
		C5303	QETC1CM-107	E CAPACITOR	100μF,16V
		C5306	NCF21HZ-103X	CAPACITOR	0.01μF,50V
		C5307	QETC1HM-474	E CAPACITOR	0.47μF,50V
		C5308	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C5309	QETC1AM-107	E CAPACITOR	100μF,10V
		C5310	QETC1CM-226	E CAPACITOR	22μF,16V
		C5316	QETC1CM-476	E CAPACITOR	47μF,16V
		C5317	QETC1CM-107	E CAPACITOR	100μF,16V
		C6001	QETC1CM-476	E CAPACITOR	47μF,16V
		C6003	QETC1CM-336	E CAPACITOR	33μF,16V
		C6004	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6005	QETC1HM-106	E CAPACITOR	10μF,50V
		C6006	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6008	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C6012	QETC1HM-106	E CAPACITOR	10μF,50V
		C6014	NCB21CK-473X	CAPACITOR	0.047μF,16V
		C6024	NCB21HK-471X	CAPACITOR	470pF,50V
		C6027	NDC21HJ-101X	CAPACITOR	100pF,50V
		C6031	QETC1HM-106	E CAPACITOR,J758EH	10μF,50V
		C6032	NCB21EK-333X	CAPACITOR,J758EH	0.033μF,25V
		C6033	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C6051	NDC21HJ-101X	CAPACITOR	100pF,50V
		C6052	NCB21HK-103X	CAPACITOR	0.01μF,50V
		L1	QQL29BJ-100Z	COIL	10μH
		L4	QQL29BJ-100Z	COIL	10μH
		L5	QQL071J-820Y	COIL	82μH
		L6	QQL071J-101Y	COIL	100μH
		L7	QQL29BJ-100Z	COIL	10μH
		L8	QQL071J-820Y	COIL	82μH
		L9	QQL29BJ-100Z	COIL	10μH
		L18	PELN1203	COIL	12μH
		L23	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		L104	QQL29BK-1R0Z	COIL	1μH
		L2251	QQL29BJ-100Z	COIL	10μH
		L2252	QQL29BJ-151Z	COIL	150μH
		L3003	QQL29BJ-100Z	COIL	10μH
		L4001	QQL071J-270Y	COIL	27μH
		L5201	PELN1184	COIL	33μH
		L5202	PELN1184	COIL	33μH
		L5301	QQL01BK-101Z	COIL	100μH
		L6002	QQL29BK-1R0Z	COIL	1μH
		L6031	QQL29BK-1R0Z	COIL,J758EH	1μH
	⚠	LF5001	PELN1204-01-01	LINE FILTER	
	⚠	LF5002	QQR0608-001	LINE FILTER	
		CF3001	QAX0356-001Z	RESONATOR	
		CF3301	QAX0356-001Z	RESONATOR	
		X1	QAX0436-001	CRYSTAL RESONATOR	
		X3001	QAX0445-001	CRYSTAL RESONATOR	
		K5101	QQR0678-001Z	FERRITE BEAD	
		PC3001	GP3S123	PHOTOTRANSISTOR	
		PC3002	GP3S123	PHOTOTRANSISTOR	
	⚠	PC5101	ON3171/R/	IC(PHOTO COUPLE)	
	⚠	PC5301	PS2501-1	PH COUPLER,J758E	
		T2051	PELN0832	OSC TRANSFORMER	
	⚠	T5001	QQS0021-001	SW TRANSF,J758EH	
	⚠		QQS0027-001	SW TRANSF,J758E	
		ET1	LP40280-001B	EARTH PLATE	

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		OT1	LP40226-001A	PC SUPPORT,X2	
		SD1	LP30364-001A	S.CASE(PRE/REC)	
		TU6001	QAU0076-001	TUNER	
		HS1	PQ45788-1-2	HEAT SINK,Q5101	
		OT2	QYTDST3006Z	SCREW,Q5101	
	⚠	F5001	QMF51E2-1R6J1	FUSE	T1.6A
		FC5001	QNG0006-001Z	FUSE CLIP,F5001	
		FC5002	QNG0006-001Z	FUSE CLIP,F5001	
		J7108	PU61012	MINI JACK,R.PAU I/O	
		CN1	QGF1018C1-11	FPC CONNECTOR,(1-11)U.DRUM	
		CN2001	QGF1207C1-07	FPC CONNECTOR,(1-7)A/C HEAD	
		CN2002	QGB2532J1-02	CONNECTOR,(1-2)FE HEAD	
		CN3001	QGB2015M1-08	CONNECTOR,(1-8)CAP MOTOR	
		CN3003	QGB2532J1-02	CONNECTOR,(1-2)L.MOTOR	
		CN3004	QGB2534J2-04	CONNECTOR,(1-4)R.MOTOR	
		CN3005	QGF1207C1-12	FPC CONNECTOR,(1-12)SW/DISPLAY	
		CN3006	QGF1207C1-07	FPC CONNECTOR,(1-7)JOG/SHUTTL	
		CN4001	QGF1207C1-04	FPC CONNECTOR,(1-4)DRUM MDA	
	⚠	CN5001	QGA7901C3-02	CONNECTOR,(1-2)AC IN	
		CN7104	QGB2013K1-11	CONNECTOR,(1-11)TERMINAL	
		CN7105	QGB2013K1-13	CONNECTOR,(1-13)TERMINAL	
		CN7106	QGB2013K1-11	CONNECTOR,(3-13)TERMINAL	
		CN7162	QGF1207C1-05	FPC CONNECTOR,(1-5)FRONT	
	⚠	CP3003	ICP-N20	CIRCUIT PROTECTOR	
	⚠	CP4001	ICP-N15	CIRCUIT PROTECTOR	
	⚠	CP5301	ICP-N38	CIRCUIT PROTECTOR	
	⚠	CP5302	ICP-N25	CIRCUIT PROTECTOR	

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TERMINAL BOARD ASSEMBLY <06>

PW1	LPA10016-03B1	TERM BOARD ASSY,J758EH	
	LPA10016-04B1	TERM BOARD ASSY,J758E	
IC201	LC74799-9608	IC	
IC7131	BH7634AS	IC	
IC7132	BA3129F	IC	
Q203	2SD1819A/QRS/-X	TRANSISTOR	
	or 2SC4081/QRS/-X	TRANSISTOR	
	or 2PC4081/R/-X	TRANSISTOR	
Q7131	2SB1218A/QR/-X	TRANSISTOR	
	or 2SA1576A/QR/-X	TRANSISTOR	
	or 2PA1576/R/-X	TRANSISTOR	
D7132	1SS133	DIODE,J758E	
	or 1N4148M	DIODE,J758E	
D7133	1SS133	DIODE,J758E	
	or 1N4148M	DIODE,J758E	
R201	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W
R204	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W
R205	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W
R206	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W
R208	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W
R211	NRSA02J-103X	MG RESISTOR	10kΩ, 1/10W
R213	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W
R226	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W
R252	NRSA02J-123X	MG RESISTOR	12kΩ, 1/10W
R253	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W
R254	NRSA02J-562X	MG RESISTOR	5.6kΩ, 1/10W
R255	NRSA02J-182X	MG RESISTOR	1.8kΩ, 1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R258	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R7101	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
		R7102	QRE141J-750Y	RESISTOR	75Ω,1/4W
		R7104	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7105	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7106	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7107	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7108	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
		R7109	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
		R7111	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7112	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7113	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7114	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7115	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7116	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7133	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R7134	NRSA02J-511X	MG RESISTOR	510Ω,1/10W
		R7136	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R7137	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R7138	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R7139	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R7140	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R7141	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R7147	NRSA02J-822X	MG RESISTOR,J758E	8.2kΩ,1/10W
		R7148	NRSA02J-123X	MG RESISTOR,J758E	12kΩ,1/10W
		R7149	NRSA02J-822X	MG RESISTOR,J758E	8.2kΩ,1/10W
		R7150	NRSA02J-123X	MG RESISTOR,J758E	12kΩ,1/10W
		C201	NDC21HJ-100X	CAPACITOR	10pF,50V
		C205	NDC21HJ-470X	CAPACITOR	47pF,50V
		C206	NDC21HJ-470X	CAPACITOR	47pF,50V
		C207	NCB21CK-224X	CAPACITOR	0.22μF,16V
		C209	NCB21CK-224X	CAPACITOR	0.22μF,16V
		C211	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C213	QEKJ1HM-105	E CAPACITOR	1μF,50V
		C215	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C219	NCB21CK-224X	CAPACITOR	0.22μF,16V
		C221	NDC21HJ-330X	CAPACITOR	33pF,50V
		C251	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C252	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C253	NCB21CK-224X	CAPACITOR	0.22μF,16V
		C254	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C255	NCB21EK-333X	CAPACITOR	0.033μF,25V
		C256	QEKJ1EM-475	E CAPACITOR	4.7μF,25V
		C258	NDC21HJ-560X	CAPACITOR	56pF,50V
		C7101	NCB21HK-681X	CAPACITOR	680pF,50V
		C7102	NCB21HK-681X	CAPACITOR	680pF,50V
		C7105	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7106	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7110	NCB21HK-681X	CAPACITOR	680pF,50V
		C7111	NCB21HK-681X	CAPACITOR	680pF,50V
		C7114	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7115	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7119	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7120	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7132	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C7133	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7134	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C7135	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C7136	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C7137	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C7138	NDC21HJ-330X	CAPACITOR	33pF,50V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C7139	NDC21HJ-330X	CAPACITOR	33pF,50V
		C7140	NDC21HJ-330X	CAPACITOR	33pF,50V
		C7141	NDC21HJ-330X	CAPACITOR	33pF,50V
		C7142	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C7143	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7144	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C7145	QEKJ0JM-476	E CAPACITOR	47μF,6.3V
		C7146	NCB21HK-102X	CAPACITOR	0.001μF,50V
		C7147	QEKJ1CM-106	E CAPACITOR	10μF,16V
		L202	QQL29BJ-330Z	COIL	33μH
		L204	QQL29BK-1R0Z	COIL	1μH
		L206	QQL231J-1R0Y	COIL	1μH
		L251	QQL231J-100Y	COIL	10μH
		L252	QQL231J-220Y	COIL	22μH
		L7101	QQL231J-R47Y	COIL	0.47μH
		L7102	QQL231J-4R7Y	COIL	4.7μH
		L7103	QQL231J-4R7Y	COIL	4.7μH
		L7104	QQL231J-4R7Y	COIL	4.7μH
		L7105	QQL231J-4R7Y	COIL	4.7μH
		L7106	QQL231J-1R0Y	COIL	1μH
		L7107	QQL231J-4R7Y	COIL	4.7μH
		L7108	QQL231J-4R7Y	COIL	4.7μH
		L7109	QQL231J-4R7Y	COIL	4.7μH
		L7110	QQL231J-4R7Y	COIL	4.7μH
		L7112	QQL231J-4R7Y	COIL	4.7μH
		L7113	QQL231J-4R7Y	COIL	4.7μH
		L7132	QQL231J-1R0Y	COIL	1μH
		L7133	QQL231J-1R0Y	COIL	1μH
		L7134	QQL231J-1R0Y	COIL	1μH
		L7135	QQL231J-1R0Y	COIL	1μH
		ET1	PQ21987-1-1	E.PLATE(TERM.)	
		TB1	LP30361-003A	TERMINAL BOARD ASSY	
		OT1	QYTDSF3008Z	SCREW,X8	
		J7101	PEMC1177	RGB21PIN SOCKET,A/V 1	
		J7102	PEMC1177	RGB21PIN SOCKET,A/V 2	
		J7103	QNN0023-002	PIN JACK,AUDIO OUT(R)	
		J7104	QNN0023-003	PIN JACK,AUDIO OUT(L)	
		CN7101	QGB2013J1-13	CONNECTOR,(1-13)MAIN	
		CN7102	QGB2013J1-11	CONNECTOR,(3-13)MAIN	
		CN7103	QGB2013J1-11	CONNECTOR,(1-11)MAIN	

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AUDIO CONTROL BOARD ASSEMBLY <12>

	PW1	LPA10010-01A1	A/C HEAD BOARD ASSY
	CN1	QGF1208F1-07	FPC CONNECTOR

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DEMOD BOARD ASSEMBLY <14>

	PW1	LPA10021-01A	DEMOD BOARD ASSY,J758EH
		LPA10030-01A	DEMOD BOARD ASSY,J758E
	IC6701	MSP3415D	IC,J758EH
		TDA9821/V1	IC,J758E
	IC6702	TDA9840	IC,J758E

⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q6701	2SC3068	TRANSISTOR,J758EH	
	DTC144EU	TRANSISTOR,J758E	
Q6702	DTC144EU	TRANSISTOR,J758E	
	2SC3354/TS/-T	TRANSISTOR,J758EH	
Q6704	DTC114EU	TRANSISTOR,J758EH	
Q6705	DTC114EU	TRANSISTOR,J758EH	
D6701	1N4148M	DIODE,J758E	
	or 1SS133	DIODE,J758E	
D6702	MTZJ9.1B	ZENER DIODE,J758EH	
D6703	1N4148M	DIODE,J758EH	
	or 1SS133	DIODE,J758EH	
D6704	1N4148M	DIODE,J758EH	
	or 1SS133	DIODE,J758EH	
R6701	NRSA02J-101X	MG RESISTOR,J758EH	100Ω,1/10W
	NRSA02J-331X	MG RESISTOR,J758E	330Ω,1/10W
R6702	NRSA02J-101X	MG RESISTOR,J758EH	100Ω,1/10W
	NRSA02J-273X	MG RESISTOR,J758E	27kΩ,1/10W
R6703	NRSA02J-271X	MG RESISTOR,J758EH	270Ω,1/10W
R6704	NRSA02J-101X	MG RESISTOR,J758EH	100Ω,1/10W
	NRSA02J-152X	MG RESISTOR,J758E	1.5kΩ,1/10W
R6705	NRSA02J-331X	MG RESISTOR,J758E	330Ω,1/10W
	NRSA02J-472X	MG RESISTOR,J758EH	4.7kΩ,1/10W
R6706	NRSA02J-101X	MG RESISTOR,J758E	100Ω,1/10W
	NRSA02J-392X	MG RESISTOR,J758EH	3.9kΩ,1/10W
R6707	NRSA02J-101X	MG RESISTOR,J758E	100Ω,1/10W
	NRSA02J-470X	MG RESISTOR,J758EH	47Ω,1/10W
R6708	NRSA02J-102X	MG RESISTOR,J758EH	1kΩ,1/10W
	NRSA02J-103X	MG RESISTOR,J758E	10kΩ,1/10W
R6709	NRSA02J-271X	MG RESISTOR,J758EH	270Ω,1/10W
	NRSA02J-392X	MG RESISTOR,J758E	3.9kΩ,1/10W
R6710	NRSA02J-102X	MG RESISTOR,J758E	1kΩ,1/10W
	NRSA02J-151X	MG RESISTOR,J758EH	150Ω,1/10W
R6711	NRSA02J-392X	MG RESISTOR,J758E	3.9kΩ,1/10W
R6712	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R6713	NRSA02J-103X	MG RESISTOR,J758EH	10kΩ,1/10W
	NRSA02J-273X	MG RESISTOR,J758E	27kΩ,1/10W
R6714	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R6716	NRSA02J-102X	MG RESISTOR,J758EH	1kΩ,1/10W
R6718	NRSA02J-684X	MG RESISTOR,J758EH	680kΩ,1/10W
VR6701	QVZ3521-222Z	V RESISTOR,J758E	
C6701	NDC21HJ-101X	CAPACITOR,J758EH	100pF,50V
	QEKJ1CM-106	E CAPACITOR,J758E	10μF,16V
C6702	NCB21HK-103X	CAPACITOR,J758E	0.01μF,50V
	NDC21HJ-101X	CAPACITOR,J758EH	100pF,50V
C6703	QEKJ1HM-225	E CAPACITOR,J758E	2.2μF,50V
	QEKJ1CM-336	E CAPACITOR,J758EH	33μF,16V
C6704	QEKJ1CM-107	E CAPACITOR,J758EH	100μF,16V
	QEKJ1HM-225	E CAPACITOR,J758E	2.2μF,50V
C6705	NCB21HK-103X	CAPACITOR,J758EH	0.01μF,50V
	QEKJ1HM-225	E CAPACITOR,J758E	2.2μF,50V
C6706	NCB21HK-103X	CAPACITOR,J758E	0.01μF,50V
	NCB21HK-223X	CAPACITOR,J758EH	0.022μF,50V
C6707	NCB21HK-103X	CAPACITOR,J758EH	0.01μF,50V
	NDC21HJ-101X	CAPACITOR,J758E	100pF,50V
C6708	NCB21HK-103X	CAPACITOR,J758EH	0.01μF,50V
	NDC21HJ-101X	CAPACITOR,J758E	100pF,50V
C6709	QEKJ1CM-106	E CAPACITOR,J758E	10μF,16V
	QEKJ1CM-336	E CAPACITOR,J758EH	33μF,16V
C6710	NCB21HK-682X	CAPACITOR,J758EH	0.0068μF,50V
	NCB21HK-103X	CAPACITOR,J758E	0.01μF,50V
C6711	NCB21HK-103X	CAPACITOR,J758E	0.01μF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
	NCB21HK-682X	CAPACITOR,J758EH	0.0068μF,50V
C6712	NCB21HK-103X	CAPACITOR,J758E	0.01μF,50V
	QEKJ1HM-225	E CAPACITOR,J758EH	2.2μF,50V
C6713	QEKJ1CM-106	E CAPACITOR,J758E	10μF,16V
	QEKJ1HM-225	E CAPACITOR,J758EH	2.2μF,50V
C6714	NCB21HK-103X	CAPACITOR,J758EH	0.01μF,50V
	QEKJ1CM-106	E CAPACITOR,J758E	10μF,16V
C6715	QEKJ1CM-106	E CAPACITOR,J758E	10μF,16V
C6716	NCB21HK-103X	CAPACITOR,J758E	0.01μF,50V
C6717	NCB21HK-223X	CAPACITOR,J758EH	0.022μF,50V
	QEKJ1HM-104	E CAPACITOR,J758E	0.1μF,50V
C6718	NDC21HJ-181X	CAPACITOR,J758E	180pF,50V
	QEKJ1CM-336	E CAPACITOR,J758EH	33μF,16V
C6719	QEKJ1CM-106	E CAPACITOR,J758EH	10μF,16V
	QEKJ1CM-336	E CAPACITOR,J758E	33μF,16V
C6720	QEKJ1CM-106	E CAPACITOR,J758EH	10μF,16V
	QEKJ1HM-225	E CAPACITOR,J758E	2.2μF,50V
C6721	NCB21HK-103X	CAPACITOR,J758EH	0.01μF,50V
	QEKJ1HM-225	E CAPACITOR,J758E	2.2μF,50V
C6722	QEKJ1CM-106	E CAPACITOR,J758EH	10μF,16V
C6723	NCB21HK-103X	CAPACITOR,J758EH	0.01μF,50V
C6727	NDC21HJ-470X	CAPACITOR,J758EH	47pF,50V
C6728	NDC21HJ-470X	CAPACITOR,J758EH	47pF,50V
C6729	NDC21HJ-8R0X	CAPACITOR,J758EH	8pF,50V
C6730	NDC21HJ-1R0X	CAPACITOR,J758EH	1pF,50V
L6701	QQL29BK-1R0Z	COIL	1μH
L6702	QQL29BJ-3R3Z	COIL,J758EH	3.3μH
	QQL29BK-1R0Z	COIL,J758E	1μH
L6703	QQL29BK-1R0Z	COIL,J758EH	1μH
L6704	QQL29BK-1R0Z	COIL,J758EH	1μH
L6705	QQL29BJ-100Z	COIL,J758EH	10μH
CF6701	PU52775-2	CERAMIC FILTER,J758E	
CF6702	PU49295-2	N FILTER,J758E	
LC6701	QQR0657-013	NOISE FILTER,J758EH	
X6701	PEVB0479	CRYSTAL RESONATOR,J758E	
	QAX0443-001	CRYSTAL RESONATOR,J758EH	
T6701	QQR0583-001	LC FILTER,J758E	
BK1	LP40077-001A	BRACKET(BOARD),J758EH	
SD1	LP30478-001A	SHIELD CASE(DEMOD)	
CN6701	QGG2502K1-11	HEADER PIN,(1-11)MAIN	

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SPATIALIZER BOARD ASSEMBLY <24>

PW1	LPA10022-01A	SPATIALIZER BOARD ASSY	
IC2701	AN7395S	IC	
Q2701	2SC4081/QRS/-X	TRANSISTOR	
D2701	MTZJ10B	ZENER DIODE	
R2701	NRSA02J-105X	MG RESISTOR	1MΩ, 1/10W
R2702	NRSA02J-472X	MG RESISTOR	4.7kΩ, 1/10W
R2703	NRSA02J-122X	MG RESISTOR	1.2kΩ, 1/10W
R2705	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W
R2706	NRSA02J-0R0X	MG RESISTOR	0Ω, 1/10W
R2707	NRSA02J-101X	MG RESISTOR	100Ω, 1/10W
R2708	NRSA02J-221X	MG RESISTOR	220Ω, 1/10W
R2709	NRSA02J-223X	MG RESISTOR	22kΩ, 1/10W
C2701	QEKJ1CM-106	E CAPACITOR	10μF,16V
C2702	QEKJ1CM-106	E CAPACITOR	10μF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C2703	QEKJ0JM-226	E CAPACITOR	22μF,6.3V
		C2704	QEKJ0JM-226	E CAPACITOR	22μF,6.3V
		C2705	NCB21HK-563X	CAPACITOR	0.056μF,50V
		C2706	NCB21HK-393X	CAPACITOR	0.039μF,50V
		C2707	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2708	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2710	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C2711	NCB21HK-273X	CAPACITOR	0.027μF,50V
		C2712	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C2713	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C2716	QEKJ1CM-476	E CAPACITOR	47μF,16V
		CN2702	QGG2502K1-08	HEADER PIN,(1-8)MAIN	

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SW/DISPLY BOARD ASSEMBLY <28>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		PW1	LPA10018-06B1	DISPLAY BOARD ASSY,J758EH	
			LPA10018-07B1	DISPLAY BOARD ASSY,J758E	
		IC7001	M35500BFP	IC	
			or M35500AGP	IC	
			or M35500BGP	IC	
		IC7002	PNA4652M00XB	IR DETECT UNIT	
			or GP1U281X	IR DETECT UNIT	
		D7002	RD9.1ES/B2/-T2	ZENER DIODE	
			or UZ9.1BSB	ZENER DIODE	
			or MTZJ9.1B	ZENER DIODE	
		D7004	1N4148M	DIODE	
			or 1SS133	DIODE	
		D7005	1N4148M	DIODE	
			or 1SS133	DIODE	
		D7009	SLR-342DC3F	LE DIODE	
		D7010	SLR-342VC3F	LE DIODE	
		R7001	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7002	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7003	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7004	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7005	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7006	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7007	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7008	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7009	QRE141J-153Y	RESISTOR	15kΩ,1/4W
		R7010	QRE141J-153Y	RESISTOR,J758EH	15kΩ,1/4W
		R7013	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7014	QRE141J-0R0Y	RESISTOR	0Ω,1/4W
		R7015	QRE141J-0R0Y	RESISTOR	0Ω,1/4W
		R7020	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7021	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R7022	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
		R7023	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
		R7024	QRE141J-272Y	RESISTOR	2.7kΩ,1/4W
		R7025	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
		R7026	QRE141J-682Y	RESISTOR	6.8kΩ,1/4W
		R7027	QRE141J-153Y	RESISTOR	15kΩ,1/4W
		R7028	QRE141J-393Y	RESISTOR	39kΩ,1/4W
		R7030	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7031	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R7032	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
		R7033	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
		R7034	QRE141J-272Y	RESISTOR	2.7kΩ,1/4W
		R7035	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
		R7036	QRE141J-682Y	RESISTOR	6.8kΩ,1/4W
		R7037	QRE141J-153Y	RESISTOR	15kΩ,1/4W
		R7038	QRE141J-393Y	RESISTOR	39kΩ,1/4W
		R7040	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7041	QRE141J-331Y	RESISTOR	330Ω,1/4W
		C7001	QDVB1EZ-223Y	CAPACITOR	0.022μF,25V
		C7002	QEKC1HM-106	E CAPACITOR	10μF,50V
		C7007	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C7008	QDVB1EZ-223Y	CAPACITOR	0.022μF,25V
		C7009	QCSB1HJ-150	CAPACITOR	15pF,50V
		C7010	QCFB1HZ-104	CAPACITOR	0.1μF,50V
		C7011	QEKJ0JM-227	E CAPACITOR	220μF,6.3V
		C7192	QCBB1HJ-681	CAPACITOR	680pF,50V
		C7194	QCBB1HJ-681	CAPACITOR	680pF,50V
		L7191	QRE141J-101Y	RESISTOR	100Ω,1/4W
		L7192	QRE141J-101Y	RESISTOR	100Ω,1/4W
		S7001	QSW0619-002Z	TACT SWITCH,POWER	
		S7002	QSW0619-002Z	TACT SWITCH,CH+	
		S7003	QSW0619-002Z	TACT SWITCH,CH-	
		S7004	QSW0619-002Z	TACT SWITCH,REC	
		S7005	QSW0619-002Z	TACT SWITCH,PAUSE	
		S7008	QSW0619-002Z	TACT SWITCH,FF	
		S7009	QSW0619-002Z	TACT SWITCH,REW	
		S7010	QSW0619-002Z	TACT SWITCH,MENU	
		S7011	QSW0619-002Z	TACT SWITCH,OK	
		S7012	QSW0619-002Z	TACT SWITCH,REVIEW	
		S7013	QSW0619-002Z	TACT SWITCH,ST BOX	
		S7014	QSW0619-002Z	TACT SWITCH,SP/EP	
		S7015	QSW0619-002Z	TACT SWITCH,TV/VCR	
		DI7001	QLF0032-002	FL TUBE	
		HD1	PQ34668	FDP HOLDER(L),DI7001	
		HD2	PQ34669	FDP HOLDER(R),DI7001	
		HD3	PQM30038-6	LED HOLDER,D7009	
		HD4	PQM30038-6	LED HOLDER,D7010	
		FW7001	QUM032-07A4A4	PARA RIBON WIRE	
		J7191	PEMC1009-04	PIN JACK,VIDEO IN	
		J7192	PEMC1010-03	PIN JACK(SW),AUDIO IN(L)	
		J7193	PEMC1010-02	PIN JACK(SW),AUDIO IN(R)	
		CN7001	QGF1208C1-12	FPC CONNECTOR,(1-12) MAIN	
		CN7191	QGF1207C1-05	FPC CONNECTOR,(3-7)MAIN	

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REC SAFETY BOARD ASSEMBLY <32>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		PW2	LPA10018-01B2	REC SAFETY BOARD ASSY
		S7041	QSW0602-002	PUSH SWITCH

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JOG BOARD ASSEMBLY <37>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		PW3	LPA10018-01B3	JOG BOARD ASSY
		UN7091	PEME0786-02	JOG SHUTTLE ASSY
		CN7005	QGF1207F1-07	FPC CONNECTOR,(1-7)MAIN

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	

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TRI-R BOARD ASSEMBLY <39>

		PW1	PB11049A-01	TRI-R BOARD ASSY	
		IC3001	JCP0065	IC	
		Q3001	DTC124EU	TRANSISTOR	
		R3001	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W
		R3002	NRSA02J-475X	MG RESISTOR	4.7MΩ,1/10W
		R3003	NRSA02J-274X	MG RESISTOR	270kΩ,1/10W
		R3004	NRSA02J-564X	MG RESISTOR	560kΩ,1/10W
		R3005	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R3006	QRE141J-184Y	RESISTOR	180kΩ,1/4W
		R3007	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3008	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R3009	NRSA02J-155X	MG RESISTOR	1.5MΩ,1/10W
		C3001	NDC21HJ-221X	CAPACITOR	220pF,50V
		C3003	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3004	NDC21HJ-221X	CAPACITOR	220pF,50V
		C3005	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3006	NCF21HZ-103X	CAPACITOR	0.01μF,50V
		C3007	QCSB1HJ-220	CAPACITOR	22pF,50V
		C3008	NCF21HZ-103X	CAPACITOR	0.01μF,50V
		C3009	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3010	NDC21HJ-331X	CAPACITOR	330pF,50V
		C3011	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3012	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3013	QETC1CM-476	E CAPACITOR	47μF,16V
		C3014	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3015	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3016	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3017	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3018	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3019	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C3020	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3021	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3022	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C3023	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C3024	NCB21CK-474X	CAPACITOR	0.47μF,16V
		C3025	NDC21HJ-391X	CAPACITOR	390pF,50V
		C3031	QETC1HM-105	E CAPACITOR	1μF,50V
		BK1	LP40077-001A	BRACKET(BOARD)	
		CN3001	QGG2502K1-10	HEADER PIN,(1-10)MAIN	

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LOADING MOTOR BOARD ASSEMBLY <55>

		PW2	LPA10010-01A2	L.MOTOR BOARD ASSY	
		CN1	QGB2533K1-02	CONNECTOR	

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

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VIDEO DIVISION

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